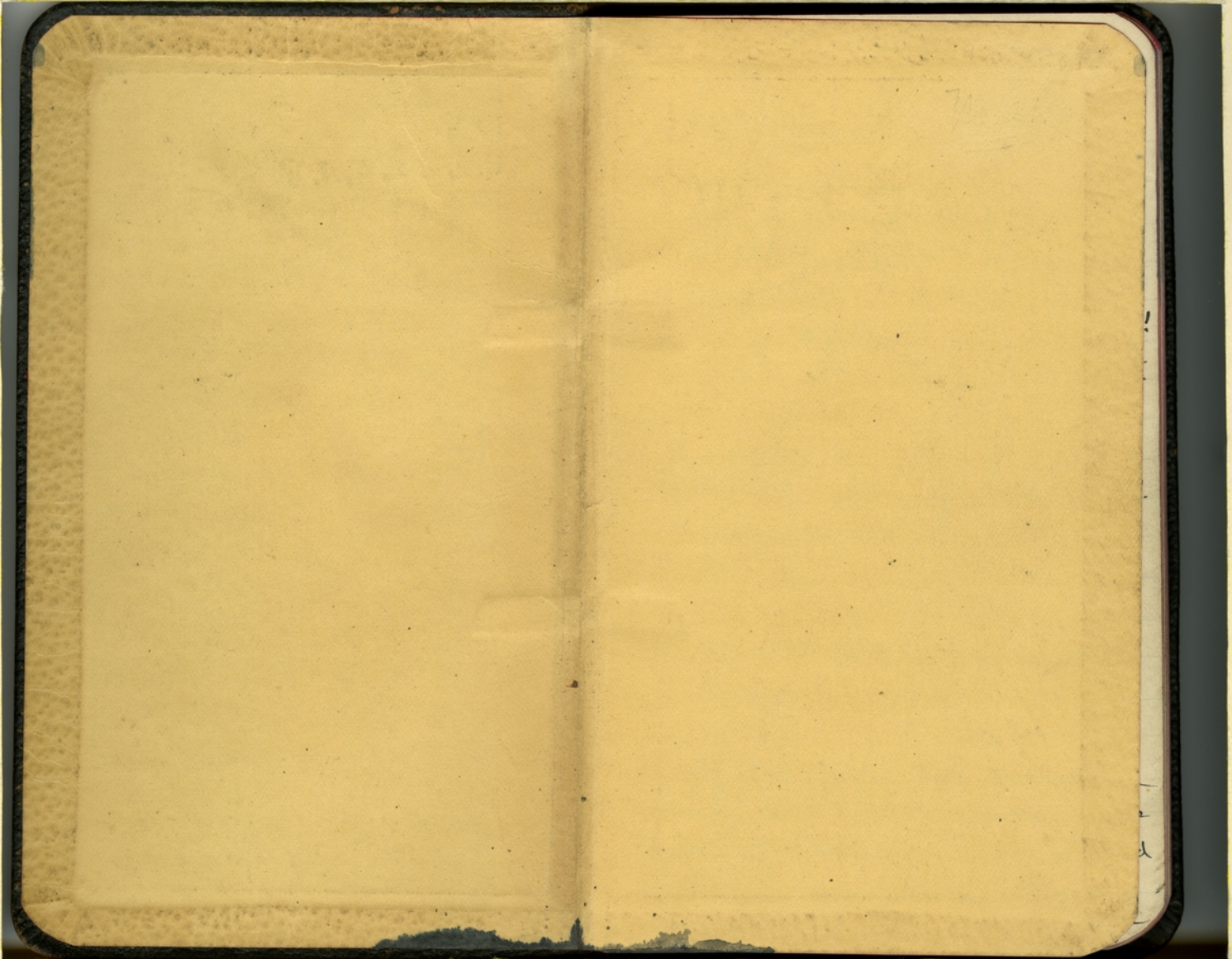




Field Book
of
Willis L. Jepson

- - - 1910 - - -

If lost, finder please
return to W. L. Jepson,
Dept. of Botany, University
of California, and receive
reward.

Carmel to Pt. Lobos

- Monterey Pine, the cones persist about eight years, very likely ten years. Observed at Pt. Lobos. There are trees on the cliffs at the Abalone station that have furnished comrades to the sea, just as the cypress. These trees are in their main branches extremely angular contorted as a result of wind violence.
- Monterey Cypress - the fruiting is very heavy and towards the end of the slender branches and so conspicuous. One cluster of cones was six inches in diameter and contained 51 cones in the

January 5, 1909.

bunch.

- Bishop Pine is near Carmel. Trees 40 to 60 feet high. ^{No!! see ahead.}
- *Lupinus arboreus* is ever-green doubtless because heavily foliated now.
- Monterey Cypress, wind-control. Tabular flattening of crowns or partwise of crowns, i.e. each branch, making series of terraces upward from below, this is the effect of wind. Young trees are less or not at all affected. Trees back of shore even a little have the regular conical form and long-pointed finger tips to branches. These long branches are in sharp contrast to the stubby branches of wind-control trees.

Carmel to Pescadero Pt.

- Monterey Pine, tree on 17-Mile drive between Carmel and Pebble Beach, its crown branches filled with cones. All the long ultimate branches crowded with cone circles. I count as high as 27 circles. There are ^{stray} cones back of this 15 feet which must be at least 25 years old; and cones on main trunk at least 30 years old. This tree contains now at a rough estimate 6150 cones. Each long branch bears on an average 50 cones (3 in a whorl); I count roughly 123 branches. - not a close count for I counted from one side

January 6, 1909.

- of the tree as best I could. I see another tree that has at a guess 10,000 cones.
- Monterey Cypress, fallen tree sawed through at 5 ft. above ground. 68 rings at cut + 6 = 74 years. Diam. (average) = $16\frac{1}{2}$ inches.
- Monterey Cypress - a fair amount of reproduction in places a little back of shore, right on shore where wind-control trees are conspicuous there are no little trees or rarely one.

Midway Pt. Jan 6

- Midway Point. At this place the Cypress lie on jetting cliff which most frequently has its picture taken.

- Yerba Buena - reproduces by stolons.

- *Pinus radiata*. Logged stump near Cypress Pt. 37 years + 5 seedling years = 42. Stump 1 ft h. $27\frac{1}{2}$ in. average diam.

Some rings $\frac{3}{4}$ in. wide, showing rapid growth of these trees.

Pacific Grove to Carmel Jan. 7.

- Monterey Pine near Cypress Pt. = 73 rings + 5 = 78.
About 3. ft diam.

- Walked across the heart of the Pacific Improvement Co's reservation, keeping well up towards the Point Pinos ridge crest altho in the basin, rather than hedging, as we walked, towards the ocean. In swales on the great open chaparral-covered burn in the centre of the district the Monterey Pine is establishing itself in seedlings and young trees by the millions. This is not an exaggeration of speech. In order to determine

Pacific Improvement Reservation.

something of the density of the stand I laid off a plot ten feet square = 100 sq. ft.

I counted the seedlings or young saplings as Ryder checked them off. There were 612 (!)

They ranged in size from 1 to 5 feet in height. None of the dead ones were counted.

In a swale where the saplings were older I noted annual growth in length of the leader to be 4 or 5 feet frequently. One tree in its sixth year grew 8 feet, and another in its sixth year grew 13 feet!

Another grew 6 ft 2 inches in about its 6th or 7th year.

Cypress Pt. Jan. 8, 09

- Monterey Cypress. The largest and densest part of the grove is near Cypress Point; stretching south to Midway Point and to Pescadero Pt the cypresses decrease gradually in numbers. Near Cypress Point they face the ocean in great numbers rising up to the crest of the low hill. Each branch is flattened horizontally so that the the forest of crowns presents an ascending series of stratifications or terraces rising to the crown of the hill.

The angular flattened stems arise as a result of breaking off of the main branch by wind the growth of the lateral

Cypress Point

branch into a crown portion of some size and its weight resulting in board buttressing at the angles.

- At Cypress Point the forest is receding from the point and skeleton trees lie everywhere over the little plateau. The buttress angles prevent their speedy decay since the logs do not lie along the ground their whole length but are held off it more or less.

Jan. 8, 1910.

- Cypress, Monterey. There are fine trees at Cypress Pt. proper, the finest and largest. The largest trees measured by me stood very near the Point. Their measurements were as follows:

<u>Height</u>		<u>circ. at 4 1/2 ft.</u>
No. 1.....	50 ft.	16 ft., 5 in.
No. 2.....	65 ft.	20 ft.

- *Cupressus macrocarpa*, Nearly everywhere on the inside or inner margin of the Cypress Point - Pescadero Point grove the Monterey Pine is pressing on it, its aggressive seedlings developing into a dense forest. The trees of cypress is nowhere more

Pacific Improvement Reserv.

than 320 yards from the ocean. This is the furthest station I found from the ocean.

- *Cupressus macrocarpa* - board branches are I suppose due to the abrupt angles formed by wind-breakage, the shifting of the load of the crown or branch and the filling in of the space in the angle. One of these boards which had such an origin measured 9 ft. 1 in. across it. It averaged about 6 in. thick. This was just at Midway Point.

Jan. 9, 1910.

No. 4001 *Cupressus govaniana*. Narrow grove in middle of Pacific Improvement Company's reservation, on west slope Pt. Pinos ridge, about $\frac{1}{2}$ mile below summit. The grove parallels a little barranca (this on the south) which may have helped save it from utter annihilation. The locality is in the midst of the great fire burn which makes such a vast hole in the forest of Monterey Pine. The cypresses are 4 to 10 feet high, mostly standing very thickly (3 to 6 to the square foot). There are "poles" unbranched, 4 feet high, the upper half with 5 or more clusters of cones, 1 to 6

Pacific Improvement Reserve Pacific Prov.

cones in a cluster. The taller trees branch freely, with the cones towards the end of the branches, usually in heavy clusters, 6 to 12 or 15. The crowns are yellowish.

The fire has left thousands of standing killed trees, the cones persisting by the hundreds.

= 4001a

Seedlings by the thousands fruiting at 1 foot in height.

Terminal pair of cones with conical umbos; remainder with crescent-shaped umbos. Sometimes terminal pair of scales little developed and without umbos at all.

associates = *Pinus muricata*

Jan. 9, 1910. Monterey.

and *Pinus radiata*. Former trees 30 ft. h. & 1 ft diam. at base (overthrown in last fire).

- Variation in cones as to size and umbos very great. Scales with smooth umbos to conical umbos.

- One tree or rather shrub measured 2 ft 2 in. circ at ground and 12 feet tall. There is an individual in lower part of grove = 15 feet h.

No. 4002. *Pinus radiata* var. *laevigata*. See next page.

No. 4003. *Pezomachus* on *Pinus radiata*.

No. 4004. *Arctostaphylos vestita* Eastw.

Center of Reservation.

Pacific Improvement ^{Reserv.}
Pacific Grove

- *Pinus muricata*, fruiting at 5 years.
- *Pinus radiata*. Slender pole-like form is common on the sterile granitic sand from Carmel northward through the center of the reservation. The cones are very small, 2 inches long, subglobose when open and strikingly like *Pinus muricata* cones. This is the variety *laevigata* doubtless. The cones persist a long time. Cones on main axis of trees 20 to 30 years old.

January 9, 1910.

- Crest of Pt. Pinos Ridge, west slope - chaparral area where fire has been. I note the following species:

1. *Gaultheria shallon* Ph.
2. *Vaccinium ovatum* Ph.
3. *Castanopsis chrysophylla* var. *minor*. This is a low spreading scrub, but the leaves have a short abrupt point, and are blunt (rough-like (not plane), showing them to be different from *Castanopsis sempervirens*).
4. *Arctostaphylos vestita* Eastw.

Berkeley

- Notes on Sinogonum*
- Hartness, H. W. See Memoir by Hittell (U.C. Library).
 - Calif. botanists. Consult Gray's memoirs in his "Coll. writings".
 - "The deep plateau of the ocean is quickly reached in some places as off the Farallones, the Santa Lucia Range, the Mendocino range" - Geo. Davidson, in S.F. Examiner, Feb. 18, 1910.
 - *Dirca occidentalis*. In sectioning ovaries found one ovary which was 2-celled, one ovule in each cell.  Something like that.

Teratological

Material from Berkeley.
Feb. 18, 1910.

February, 1910.

- *Pinus coulteri*. cone from Mt. Diablo, near Clayton, T.H. Goodspeed. Cots. = 17, 16, 16, 16, 15, 15. - W.L.J.
- Cultivated trees - *Torreya Californica*, sown Jan. 16, '09, sprouted and potted Nov. 20, '09. - W.L.J. + Perrine.
- *Sequoia gigantea*, seeds from Atwell Mill. Cotyledons = 4, 5, 5, 4, 5, 4, 4, 5, 4, 5, 4.

Berkeley

- Phil. Cal. - I am just receiving the first reviews of my Flora of California, Pts 1 & 2. The critics mostly or even entirely confine themselves to verbal slips, not touching general principles. It is, to be sure, disconcerting enough to have such errors, but after all the main thing is this: Has the book got matter in it? Has it got stuff in it? Is it meaty? Not is it faultless. A faultless book is impossible. It is inevitable in the nature of the human mind that such slips will be made, mistakes and blunders. But is the job a big one,

Feb. 3, 1910

is it really worth while? So satisfied am I in the affirmative that it is a big task, to be done in a big way, without too much considering ^{the danger} of possible minor errors, that I go on, to finish up my job, just as other big jobs have been finished aforetime.

- Lobb, Wm. C. ^{Jepson's} Phil. Cal. 1: 520.

- J. D. B. Stillman. Leptosyne stillmanii Gray.

Ukiah, 620 ft.

- Valley Oak, vase type, tree in State Hospital grounds at ground = 4'-8" circ; at 4 ft = 3'-1" circ; 55 ft. h. Bark on main trunk light-colored, limbs in top with smooth bark. Vase-shaped primary branches in top. Lateral recurring branches below of about equal length. This tree was photographed two or three times. See Spool no. 3, exp. nos. 4 + 5. (1909-10).

These oak trees, the young ones, are often full of oak balls. "I thought", said Ryden, "that oaks bore acorns and not balls" *occidentalis Torr.* No. 4005. Cercis Mill Creek.

February 11, 1910.

- Valley Oak, stump, 4 ft. h. 251 distinct rings + 20 rings (for rotten centre, safely inside real number) + 5 for seedling. Grounds of State Hospital for Insane. Diam = 6'-10½" at centre 6 in. radius gone. Structural or ring centre not eccentric.

This stump is near the path leading up Mill Creek ^{foot}. When I stopped to count the rings Dr. Ryden (who was with me) laughed, saying: You can't get by a stump!

- *Populus Fremontii* - the tree by the Russian River bridge = 90 ft. h.

Ukiah

A Day's Botanizing in Mill
Creek, Ukiah.

- This is now the worst season
of the year as to unattract-
iveness of the country. It has
its less pleasing dress. People
say in surprise: Going botaniz-
ing now! What is there to
botanize now?

Let us see. We went out
from Ukiah towards Mill Creek.
I noticed first that the
architecture of the Valley
Oaks was much more
striking than when they are
in full dress in summer
and much more easily
studied. The foliage conceals

February 11, 1910.

or diverts one's attention from
the records of the history
of the crown and its vi-
cissitudes. Nor does one notice
in summer the extent to
which this species is infested
by the mistletoe. - Umbellularia
californica, one tree dark green
and with drooping branchlets,
another near it with light
green crown and erect branchlets
- Quercus wislizenii, the round-
crowned trees, looking some of
them like doll's trees - Pole and
vase types Valley Oak, see 2 pp.
back. - The Alder in bloom! - The
Manzanita in bloom! - And many
other points noted in the fol-
lowing pages.

Utah

^{Carl}
- Purdy says: There is a great difference amongst canyons as to whether the air circulates or not. If the air moves in a cañon it is a protection of course to fruits. But there are canyons where the air is dead - where the frost strikes and lies heavily like snow. And ice. Such canyons are so cold, heavy and damp that no horticulture is possible. Flaggs cañon may be one or the other.

- Vancouveria leaves and Berberis Aquifolium leaves grown by Purdy and shipped to S.F. for funeral wreath make-up.

February 11, 1910.

^{Carl}
- Met ^{OF. A. W.} Purdy and introduced to him ^{OF. A. W.} Ryder. Ditto Colonel La Motte. Ditto Wilcox. Then said Ryder: What a remarkable collection of friends you have! That makes three ^{great} characters I have met today! I told him about Wilcox. How he left Berkeley and a finely paying profession to live the life he loved up here in the ^{wooded} country. Ryder listened contemplatively: How cheap such a life makes that of * with his struggles and scheming and plottings to get along!

* Conscientiously I struck this name out! in 1910. The name was "Benjie"! = B.I.W. (1930).

Ukiah

- Valley Oak, south of Ukiah on Hopland Road. Tree with great fine trunk 19 ft 6 in. circ. at 4 1/2 ft. But its crown is a regenerated crown almost wholly, altho it is a large crown. The top branches are mostly sub-straight. The straight or slightly out-curved branches of the vase-type do not hold their straightness entirely through life. By the adult period these branches have lost more or less of their straightness and even become tortuous through the shifting weight of the branch and its various development.

February 11, 1910.

- A glorious day at Ukiah. The mountains rising purple in the clear sunlight. There is nothing like chaparral to give the mountains their soft delightful hues.

Off to the northwest rises the long outline of Sanhedrin covered with snow. And in a notch of the mountains to the right of Sanhedrin is the satisfying bulk of Hull Mt. - sharply defined, for it is covered with snow. The last big mt. of the Mayacunas range north of the Terraces is Cow Mt., the last, before the range breaks down to the Blue Lakes - Ukiah gap.

Willits, 1400 ft.

- Douglas Fir stumps, seven of them, healed over, in forest, near road to Sherwood, about one mile beyond the old Hawley School. They are about 3 feet high, completely healed over, with measurements as follows: 16", 18", 19", 11", 16", 16", 13".

- *Quercus dumosa* Nutt. This is found in the cañon of the Lav Gap road about 2 miles west of Ukiah. It is the typical or usual form of southern California! with flat leaves, small, irregularly few toothed.

February 12, 1910.

- *Quercus garryana*. Never before saw them in real winter dress - and what a different appearance a hillside presents from that described in 1902 & 1903, the fine "greenwood tree" slopes of the Van Arsdale ranch south of Walker Valley! Billowy masses of green. Now - not merely leafless - but showing up such a mass of hoary almost skeleton-like crowns, on account of the clothing of lichen! which is all hidden in summer. Now the lichen gives a peculiar effect to the upper or

Hillito, 1400 ft.

outer portion of the crown since the centre of the crown composed of the main branches is not lichen covered nor white-barked but heavily covered with moss; the trunks show white. So the effect is singular; white trunks, mossy main arms and branches, and coral-like or skeleton like branchlets.

- *Bambusa glauca* - one mile north of Hillito - tree by roadside 7 ft. 6 in. in diam. at 2 ft. above ground. Twenty-five feet h.

Feb. 12, 1910

- Redwood on the hills immediately east of Healdsburg - a few scattered clumps.
- *Quercus garryana*, doubtless this species, on the flats just north of Windsor.
- Redwood. Overland Auto Co's folder speaks of "Through Twenty Miles of Redwood" on the Lower Eel River.

- *Geranium*. "Cut your slips in the fall beneath the eye, hang them root up in the cellar, and they will be good for planting next spring. Don't place in soil in the fall" - *Florat in Chronicle S.F.*, Oct. 2, 1910. But why root up?

Berkeley

- *Ligonothamnus floribundus*.
 Very small percentage of
 the seed germinate. Even
 Franceschi got a great
 quantity of seed at Santa
 Cruz to get a few plants.
 And after the seedlings germi-
 nate, only a few of
 them come through. They
 damp off, etc. Cuttings
 are very difficult. They
 form a callus and
 sprout above, but nothing
 more! If I had
 a little greater bottom
 heat and could keep
 the greenhouse cool, say
 50°, I believe I could
 get them. A little

March 3, 1910.

more experience in taking
 cuttings will help. - Perrine,
 in Bot. Gard.

- Poison Oak. "Take bark of one
 of the native willows, boil
 it in water (reduce 2 gals.
 say, to 1 gal) and wash the
 affected parts with the
 solution" - This is the cure
 of W.T. Such (Berkeley Milk-
 dealer who says he has tried
 it a number of times or
 seen it tried) - the story
 through Jos. W. Flinn.
 - Dudley, Prof W.R., retiring,
 from service at Stanford. see
 S.F. Call, March 5, 1910 (or one
 issue earlier or later).

Berkeley

- In diary of Portola Exped by ^{the} "sacatales" and pagonal are described as being so high in Carmel River bottom as to cover the men on horseback. The first refers to a grass surely; the second to slender shrubs like *Baccharis* *vininea*? (This diary now being reprinted by Univ.).

- Oct. 4. - harvest feast-day in Alta California during time of Franciscans; the birthday of St. Francis di Assisi.

March 3, 1910

- Madonia at Dr. Harry Teris' place at Gilroy:

Height = 80 1/2 ft.

Diam ground = 15 ft.

" 4 ft. = 8 1/2"

" 8 " = 8 1/4"

" north branch = 13 ft. circ.

" south " = 15 " "

" crown = 90 ft.

By Hein. - 1910.

- *Phacelia tanacetifolia*, cf. Pac. Rural Press, June 4, 1904
Bee-plant. "Fiddle-neck."
"Thousand-pretty."

- Roche Triste Poplar, in Mexico where Cortez spent the night in his flight from Mexico.

Berkeley

"The Flora of California"

Several of the unfriendly critics say I will not live to complete the job. True, I may die within a year or a month. ^{Be it so.} But the

^{If it must be} man who comes after me will be inspired to write him a Flora of California. Surely he will not be inspired by the fact that I declined it!

It is incredible, the resentment the work has produced in two or three quarters. There is room for three or four floras of California - all interesting and all different. On the other hand this is not

March, 1910.

a task I would choose if any one else would put his hand to it. If I regarded purely my own pleasure and good cheer I'd have a little herbarium in a cañon with a wild hillside above so that I might taste sunshine and not bog, and hear the sound of running water and the call of quail in the chaparral.

- *Calycadenia truncata* DC.
 Coll by K.C. Lake Co, July, 1884,
 Kern Co. June 6, 1886; Sweetwater
 El Dorado Co; Edgewood (Shasta).
 - all seen in Cal. Acad HB by
 W.L.J.

Berkeley

- Sugar Pine cots = 13, 14, 16, 16, 16, 15, 15, 16
- Yellow Pine, ~~cots~~ = 10, 8, 10, 9, 9.

Sugar Pine seed from
Northfork and Yellow
Pine seed from Sisson.
bounts by Miss Hibbard.

- *Calycadenia multiglandulosa*
Bahia's Hill, Kellogg in Cal.
Acad & Calistoga June '81, E. L. G.
in his hand - noted by W. H. J.

- *Hemizonia clevelandi* Greene.
Tyhe Calistoga, Greene, 1883, Cal.
Acad. Hb. in his hand; also same
hb. Bolander, Clear Lake, in E. L. G.
hand. - (old note copied here - we g.)

- *Senecio vulgaris*, "saw it first
at Vacaville, in 1900, now common
on his lawn! - R. H. Platt in litt.
Mar. 19, 1902.

March 15, 1910.

- Miss Alice Hilgard, an exceedingly bright and brainy girl, laid down the principles so thoroughly and persuasively that nature, grand though it may be as in California, is not enough for people. Hence people admire Switzerland more because of its human interest. The human interest and association is the crowning glory to nature. I was quite dumb after such a flow of language and looked to Prof. Hilgard who is a truly nature devotee for help but he seemed to think it not worth while to enter the lists - But for amusement see p. 181, ahead (Felton, Aug. 18). // Sept. 1910

Mendocino Co.
Ukiah, 620 ft.

- *Cercas demissa*. The Coast Range one different, says Carl Purdy, from the Sierra one. Coast Range one more commonly becoming a tree, Sierra one a bush, former with black fruit, latter with red fruit.
- A wonderful day - a few white clouds riding high in a blue sky, the mountains wonderfully pure and definite, and with a soft illumination^{at noon} that is very entrancing. The Valley Oaks have not budged a bud, but the willows are foliated and the Black Oak and Buckeye in the hills.

March 25, 1920.

- No. 4006. *Ranunculus*
low wet places, often in water
Ukiah Valley.
- No. 4007. *Acer negundo* ^{var. Sarg.} ^{cal.} ^{at}
Russian River Bridge, Ukiah
^{kind of (Sarg.) Benth.}
- No. 4008. *Salix* ~~*argophylla*?~~
at Russian River Bridge.
- No. 4009. *Bercis occidentalis* Torr.
14 ft. h. Mill Creek.
- *Fraxinus oregana*, in fl. ♂ with
1, 2, or 3 stamens, the calyx
reduced to a mere rim. Panicle
very short & compact, $\frac{1}{2}$ - $\frac{3}{4}$ in.
- No. 4010. *Alchemilla occidentalis* Nutt.
Mill Creek flat.
- No. 4011. *Collomia gilioides*
Corolla "pink," but really
red! Woods in Mill Creek Cañon

Ukiah, 620 feet.

No. 4012. *Claytonia perfoliata* Donn exsicc.
~~Monte~~ woods in
 mill Creek Cañon

- Purdy ran on about the
 Cycle of fire in chaparral.
Lilium rubescens persists
 in burns where it is too
 dry for it, i.e. where its
 seedlings can not
 establish themselves
 during the rains sufficiently
 to ride over the long
 dry period. But as
 the brush grows up again
 the conditions change and
 seedlings get a hold. Then
 another fire. He also brought in
 to the scheme the beetles which
 are killed out by the fire.

March 25, 1910.

- Goose-pen trees 4000 to 5000
 years old. Cf. Laurel and
 Black Oak. Some Laurel
 goose-pens might easily
 be 4000 to 5000 years
 old. The case is different
 from an individual tree.
 The goose-pens have a
 chance to go on indefinitely.
 A hundred years is
 nothing to them. Some
 of the Black Oak circles
 which have gradually spread
 so as to be indistinctly
 recognizable represent a
 great age. Compare also
 the Redwood goose-pens.

Ukiah

- *Aquilegia eximia* - is a distinct thing with sticky herbage, midsummer flowering. It is on Red Mt.

- *Platystemon californicus*, referring to Greene's segregates, "you will have hard work making more than one species." - Carl Purdy.

No. 4013. *Erythronium hendersoni* Purdy's Garden. Crests on base inner petals.

No. 4014. *Erythronium* ^{*multiscapoideum*} ~~*hartwegi*~~ _{teste Purdy, but perhaps a slip. Purdy's Garden.}

No. 4015. " *revolutum* " " "

No. 4016. *Erythronium* ^{*multiscapoideum*} ~~*hartwegi*~~ _{teste Purdy. Purdy's Garden.}

As to No. 4014 one of us may have made a mistake when

March 25, 1910.

- *Pedicularis densiflora*. At the turn of the road, upper end of Mill Creek Cañon, as you go up the hill, one finds at this time the bare ^{dead}-leafy ground beneath the Black Oaks gay with the red of Indian Warriors, forming brilliant sharp spots of color beneath the leaves.

it was going in press.

No. 4017. *Erythronium grandiflorum*. ^{var. *pallidum*} When anthers = red, then = *E. nuttallianum*, only distinction found.

Purdy's Garden - C.R.H.

Which

Humboldt Blase. - Ovale bulbs.

- *Lilium Humboldtii*, stem single
scaly bulb-ovate class; scales
not jointed - Sierra Nevada
8 or 9 bulbs. timber areas.

There are 2 vars. with scales
jointed and roots above bulb:

var. *ocellatum*, 12 ft. tall (8-10
annually) coast S. Calif; bulb
exposed to light turns deep
purple.

Var. "minor" ^{Purdy} (Bloomerianan syn
bulb small. stem 4 ft. tall.

Buyamaca mts.

The scales of true Humboldtii are very
bitter and give the motive for Purdy to
reminisce concerning the many practical
jokes he has consummated with this bulb.

- *L. bolanderi* - scales not
jointed - ovate class

- *L. columbianum*, botanically
a small Humboldtii; small ovate
bulb like Bolanderi; scales never jointed;
miniature Bolanderi; sierras.

March 25, 1910.

White Blase - Ovale bulbs.

- *L. Washingtonianum*, the true
thing, has bulbs more nearly
rhizomatous than any other
lily of the ovate ^{type}. The bulbs
(8 inches wide sometimes)
become strictly ovate in
our garden. Scales never
jointed. Perianth segments
not closely approximate
in the tube - you can see
between them in a way
you cannot with the var.
purpureum (see ^{ill. in} Purdy cat.)
Shasta Lily is a miniature
var. of this.

- *L. rubescens*, fl. tubular, scales
not jointed

- *L. Kelloggii*, is a revoluble spotted
rubescens. Scaly bulb.

Ukiah

Leopard class.

- *Lilium pardalinum*, rootstock branching, each tip again branching, perhaps another tip branching, making five, in other words a matted rootstock - This is not a bog lily altho often spoken of as such, well-drained ^{moist} hillsides and moist meadows but not bogs. Have often taken out 300 or 400 bulbs from one cluster, in one case 8000! Stems clustered!

- *Lilium parryi* - bulb does not branch, scales with 2 or 3 joints

March 25, 1901

Small-fl. Bog Lilies.

- *Lilium parvum*
- *Lilium maritimum*

Both of these are true bog lilies. Rhizomatous like *L. parryi*, but scales with more joints. *Lilium parviflorum* belongs in the same class - Shasta and Sierra Nevada.

- of Purdy's paper in Jour. Roy. Hort. Soc. vol. 26, p. (1901).

Ukiah

- *Salix*. The willows on the west shore of the Russian River north of the bridge protect the bank from washing very effectually. Mostly *Salix sessilifolia*. It is effective because the trees are not allowed to grow up but are cut off low down so as to be kept thicket-like. As a result all sorts of debris is caught and entangled, and makes an effective barrier or rip-rap against erosive action.

March 25, 1910

Gamassia

- *G. esculenta*, segments spreading irregularly, three on one side ^{unequal,} and 3 on the other, at least in 2 sets of 3 each, although I will not say definitely, above and below (the fl. stands nearly horizontal).
- *G. leichtlinii*, segments spreading a perfect star, withering over the capsule like a bon-bon. Rare in Sonoma.
- *G. esculenta* is common in Sonoma Co. (Santa Rosa reg.)
- G. Leichtlinii* on Red Mt., the most southerly station known to Pt. Reyes.

Whials

Erythronium

- *E. purpurascens*, Leaves not mottled, undulate, ^{margined}, of dark metallic green. Flowers very small, light yellow, tinged purple; higher Sierras, California. Filaments filiform, after a few days

Sierra Nevada, 4000 ft. up,
Plumas to Placer Cos. 158
fls. crowded on a raceme.

- *E. hartwegii*. Corus forming offsets freely at the end of filiform fls. from their base. Sierra Nevada foothills, Tehama to Amador. Leaves richly mottled; inner petals auricled; style deeply divided after a few days if not on first opening; fls. in a sessile umbel and appearing as if each fl. arose from a scape of its own. Pts. white or cream with orange or yellow

Mar. 25, 1910.

base. Leaves obovate-lanceolate with broadly margined petiole.

- *E. californicum*, Bulbs ^{slender,} not producing offsets; filaments ^{filiform}; style ^{separate,} deeply trid; creamy white flowers; coast ranges of north western Cal. Leaves richly mottled; pts. auricled; style-divisions spreading widely in full anthesis. Stem 1-16-flowered. Pts. with orange base and often with orange band crossing pts. above auricles.

- *E. revolutum*. Mendocino + Humboldt cos in Redwood reg. 10-15 miles from coast, 1000 miles long + 4 miles wide; fls. in ^{Mendoc.} white, to purplish pink, often pink in Humboldt, + deep rose in northern Oregon. Fls. always opening white or

Ukiah

light pink, changing to
pink or deeper. Leaves
mottled, style deeply 3-cleft;
filaments broadly deltoid,
almost curving around the
style. -

Cf. Purdy's paper in Flora, no.
17 (1904), August.

Mar. 25, 1910.

- *Pseudotsuga taxifolia* in
Russian River Cañon. It is
growing intermixed with
Pinus sabiniana!

Which

- *Cardamine integrifolia* in wheat fields of wheat. Is increased by cultivation!
- *Calochortus lilacinus* (?) _{= *C. uniflorus*} is likewise increased by plowing and harrowing. There are a number of such native plants that have been helped by civilization and settling up of the country.
- *Bupresson macrocarpa* at Selby place, Fair Oaks, San Mateo County. The avenue of them is a very fine one because the trees have grown old enough to acquire individuality.

March 26, 1910.

- *Juglans californica*, line of trees ran along the road leading east towards Talmage from the Russian River bridge. They had to be removed on account of injury to the roadway from shading.

-
- *Hamisoma* ~~Keckermannii~~ *Greenei* Tyke in Cal. Acad. S. L. 9, Sept. 1881. Also Tehachapi Pass, June 1883, Parry; Sept. 83, K. B. - Noted by W. L. J.
-

Rebecca Ranch Grade
Calistoga

Lithospermum

- No. 4018. *Fellaea heterophylla*
Foliage with the odor of ^{fresh} cucum-
bers! Petals with one notch
on each side (rarely two).

- No. 4019. Giraffe Head.
Lamium amplexicaule L.

- *Tridentalis europaea latifolia*, very abundant.
- *Collinsia tinctoria*, gives a
sort of iodine ^{like} stain to the
hands.
- *Trillium sessile*. Only
the white fl. form in Napa
Valley. - Mrs. Hunt.
- *Arbutus menziesii*, in fl.!
- *Beanothus Parryi*, in fl.!

March 28, 1910.

- Owl's blown properly belongs to
Oreocarpus purpurascens says
Mrs. Hunt. She sees the figure of
an owl's head in the paccate cor-
olla - the gales answering to the
horns.
- "Wistaria Lupine" = *Lupinus latifolius*.
- Miss Shepherd, painter of oaks,
takes her water-colors to Vickery.
In particular the Blue Oak, all this
she did not know it by that name
but she knew the foliage was cobalt
blue. There ain't no such oak any-
where. Go back and look at the
tree. Then ^{after yielding to despair} she saw the review of
my book in the The Call and wrote
to me, sending my answer in
triumph to Vickery. At first she
was in utter despair, having felt thor-
oughly crushed by Vickery. - over -

Rebecca Ranch Grade,
sw. of Balistoga

- *Prutillaria lilacea* is at
Olama acc. Mrs. Hunt.

cont. from prev. page. If she had
known the tree by its common
name she would have taken
courage, but the charge that
she had not seen the real
color or was impressionistic
was too much.

- *Pinus attenuata* - a few trees
on Rebecca Ranch grade, per-
haps no more than 200 ft. above
level valley floor. One tree 65
ft. h. and $1\frac{1}{2}$ ft. diam. at
4 ft. within 20 ft. of Redwood!
(on northerly slope) and
Black Oak.

- Chaparral Pea = *Pickeringia*
montana.

March 28, 1910.

Napa Co.

No. 4020. ^{claytonia} *spachulata* Dougl.
~~*Montia gypsophiloi-*~~
des. Abundant in vineyards on
hillsides, coloring the slope!
It takes kindly to cultivation
as do some other native
plants. See back five pages.

No. 4021. *Fragaria californica* C. + S.
^{var. franciscana Rydb.}
No. 4022. *Beaurothus* ^{var. *ramulosus* (Greene) *var. *ramulosus* (Greene) *var. *ramulosus* (Greene)**}
Very long branches, spiny
branchlets. Disk yellow; ovary
green. (Pedicels pink)

No. 4023. *Nemophila*. Ovary caescent.
^{*heterophylla* N. & M.}

No. 4024. *Trillium sessile*. See 2 p. back.
^{*caeruleum* var. *ramulosum* (Greene) *var. *ramulosum* (Greene)*}

No. 4025. *Beaurothus*. Disk rosy
both green. (Pedicels blue).

No. 4026. ^(discarded, insect damaged) *Laudelion*. Spontaneous
in moist areas.

No. 4027. *Orthocarpus pusillus*
Bth.

No. 4028. *Geraetium viscosum*
^{*Lithophragma*}

No. 4029. *Salmonia affinis* Gray

No. 4030. *Calycanthus occidentalis* H. B.

Olema, Marin Co.

No. 4031. *Sherardia arvensis*.
 Corolla pale lavender, calyx
 rim very small and
 uneven. In pastures, abun-
 dant, in spots matting the
 ground closely. Stigmas 2.
 Tocaloma.

— *Orthocarpus*. = No. 4041.

Corolla sulphur yellow (rarely
 white), aging white, in some
 case the lips somewhat
 deflexed (in age) on tube
 and gaping widely! That
 is after changing color
 from sulphur yellow to
 white! I only noticed
 this only on the plants
 whose flowers changed
 to white. I did not

April 13, 1910.

noticed ^{it} on ^{permanent} yellow flowers.
 Its ^{rather} remarkable. No
 other *Orthocarpus* gapes so
 far as I know. Yet their
 ancestors ~~gap~~ gap! - See p. 67.

- *Snagallis arvensis* in fl.
 Decumbent plants.
- Shepherd's Needle, common
 near Tocaloma.

No. 4032. Deer Negro ^(var. *californicum* Sarg.) Many
 large trees along Olema Creek
 on the valley flat. (Not Papermill Creek).

No. 4033. *Dicentra formosa* DC.
 Stamens 6, in 2 sets of 3 each,
 or sometimes 1 free fil-
 ament in each set.

Olema

viscosum L.

No. 4034. *Cerastium*, Olema.No. 4035. *Ribes*, Olema.↑ *divaricatum* Dougl.No. 4036. *Tellima grandiflora* Dougl.

Petals at first whitish, changing in full anthesis to deep red, and reflexed from the first. Erect coxae - ^{teeth}. Styles 2. Ovary almost completely inferior. Rootstock not tuberos.

No. 4037. *Urtica californica* Greene.

Common along small streams or bases of the hills.

No. 4038. *Spergularia arvensis* L.

Olema - low fields

No. 4039. Aquatic *Callitriche palustris* L.

(Nos. 4040 both cited) ^{Olema} *Limnanthes*

No. 4040. *Filoechea douglasii* Baill.

Olema - see next page

No. 4040 *Ranunculus bloomeri* Wats.

Apr. 13, 1910.

No. 4041. *Orthocarpus fasciobarbatus*
Corolla sulphur yellow, ^{gray}
(sometimes, but rarely, white)
aging white. In a few cases
I noticed the lips deflex and
widely gap, in aging white.
- But see more specific
notes three pages back (p. 64).

(No. 4040,
- *Filoechea douglasii*) fills the low
fields. It is very handsome.
Its ^{corolla} center is - well "yellow";
a light but definite "yellow";
the tips of the petals white.
It is as beautiful a flower
for yellow and white as
Hemophilid for blue. A
U-shaped band of hairs on

Olema

very base of petal claws.

Earthquake, effect on trees.

Douglas Fir trees along rift that were thrown down were 90 to 125 ft. high and 2 to 3 ft. in diameter.

Just $\frac{1}{4}$ mile south of Shafter place, where the rift runs on to the side of a low hill.

Apr. 13, 1910.

- M.S. Baker says: I think of *Cupressus bakeri* as a tree, not a shrub.

A great fire came off of Mt. Hood* in May. The country was green but a heavy north wind was blowing, so heavy as to carry fire down hill through green chaparral. Fire was carried through the air a great distance; Douglas Fir cones were blown across the valley two miles and set fire to the country. - Sept 13, 1910.

* Hood's Peak, Sonoma Co.

- Clark, Galen. Died in Oakland March 24, 1910. Buried in Yosemite. See S.F. Chronicle (Wishley ed?) April 6, 1910.

Berkeley 1910.

- Valley Oak, Strain Ranch south of Red Bluff near town of Rawson (= r.r. station) 8 ft. diam. & spread of 100 feet in crown - acc. F.B. Kellogg, U.S. Forest Service, (ex Bot. 4).

- J.P. Moore. There is a record of *Cercara pacifica* (in my Fl.) for Tamalpais. Not there ^{say} Mrs. Brandegee ^{she} expressed her doubts in this fashion: "J.P. Moore does not know whether he stands on his head or his feet." (!). But. of. Tot 4:420 where she uses "as there" instead of "not there" again. Greene III

- *Suaeda suffrutescens* on plain Western Madera Co. See Webster in litt., May 24, 1910.

Vacaville, May 4, 1910.

- Wild Lettuce has become a great pest in grain fields, and at harvest time plays smash with the combined harvesters. Gets into the machinery and won't go through like straw but acts like hemp. I know one man ^{above hunters} who had his harvester torn all to pieces by it. - Ralph Platt.
= *Lactuca Scariola*.

- *Pristolochia californica*. The description in the Fl. W. Mid. Cal. one of the best in the book.

- J.B.D. Stillman. cf. *Microseris sylvatica* var. *Stillmani* Gray.

Berkeley

- Seeds of Coniferous trees, - Frank C. Clark, student, says his mother remembers my bot. trip through Mendocino in 1897. I stopped a few minutes at the William Clark place, where they told me that Kellogg's headquarters had been with J. H. Clark, a few miles south. Says "his father collected - cold seed 40 years ago when there were bonanza prices, ten pounds of Douglas Fir seed bringing a matter of \$100⁰⁰. But those days are past."

"Now we raise sheep. We have practically solved the coyote

May 12, 1910.

problem by building a picket fence, driving the stakes in rather closely with posts every 20 ft, a barbed wire at the ground to prevent coyotes digging under and 1 or 3 strands at top. Where there is so much feed and comparatively few coyotes, poison won't work. They won't touch anything that is killed. Sometimes they can be caught in traps, tho' not usually by baiting. But they like to worry an old carcass, ^{well} picked ^{up} weather-beaten. Throw it into a bush and the bones will tempt them. Then set traps. I should

Berkeley

think they might kill a cat,
since they will kill a fox
caught in a trap."

This boy called on me.
I did not associate him
with the Mendocino Clarke
until he told me. I asked
him if his father was
J. H. Clark. He said yes
in a very pleased way.
I sometimes have a trick
of remembering initials.
These initials I remem-
bered thirteen years
also. I had never seen
the man.

May 12, 1910.

- Coyotes. See Index to Pacific Rural Press, particularly the volumes for 1909.
- Trees and cloudburst. See index to Pac. Rural Press, 1909, January.

"Tick-wood" - Called at the Blakes (Mrs. Chas. T.) but all the others were there. Edwin used the term Tickwood but I could not make out what species of the chaparral he meant; it has narrow leaves he says and does not grow in Strawberry Cañon. Anson & Ainslie apply the term to *Baccharis douglasii*. - May 22, 1910. [= *Baccharis pilularis*.]

Berkeley to Moraga

- Botanying out Telegraph
canyon today I was overtaken
by a queer old seedy caricature,
something of a character, but past
seedy. He looked at a Mimulus I was
putting in my press and said thus:
"That wild thing? Yes it's fine."

A botanist! Forsooth, they
don't have no respect for a
botanist in California. They
don't know anything about
him. He'd starve to death
for what he'd tell them. And
the young men of California
- they don't know nothing.
They don't care. And they
don't care. They teach them
here at the University to
be horse-doctors and dentists

May 22, 1910.

and so on. Why in the olden
times the barber pulled the teeth.
The doctors don't know anything.
So I tell you. They ought to know
all the plants but they don't.
A botanist as I say would
starve, unless he had a
position in the University.
And then he'd get his wage!
But they might let him
go in 2 or 3 months. And
anyway they'd be bothering
him to death with questions.
Yes, you are right young man,
that is a pretty hill. It is
as pretty a hill as there is
in California. Yes, it is
as you say a N.E. slope. On
the the S.W. slope it burns

Berkeley to Moraga
(Telegraph Cañon).

to death, and the jackass
rabbit - he dies."

No. 4042. Grass

Berkeley Hills.

Lolium multiflorum Lam.

No. 4043. *Mimulus Langedorfi* *

Mimulus guttatus DC. Det. A. S. G.

Berkeley Hills, in Telegraph Cañon.

No 4044. ~~*Blepharipappus*~~
Layia gaillardiioides (H. + A.)
DC.

Rays sulphur yellow, the
upper half or $\frac{2}{3}$ = white.
Hills near north end of Moraga.

No. 4045. *Traximon*

Berkeley Hills

* = *Mimulus guttatus* DC. var. *grandis*
Greene.

May 22, 1910.

No. 4046. Grass.

Berkeley Hills.

= *H. brachyantherum* Nevski
~~*Hordium nodosum* L.~~

No. 4047. *Layia hieracioides* (DC) H. + A.
~~*Blepharipappus hieracioides*~~

Greene. E. side of Berkeley Hills
between Fish Ranch and Moraga.

No. 4048. *Phacelia californica* Cham.

Corolla lavender, bowl-shaped,

2 lines long; the stamens nearly
twice as long, arising from a
little pocket-shaped scale, the
scale continued upward on
each side the filament as
a wing, the wings connate
with the wings of adjacent
scale. Anthers yellow. Filament
about middle with very few.

Berkeley to Moraga (Telegraph Cañon).

and very short spreading hairs,
these so scattered and so
short as to be seen only
under a hand lens.

Berkeley Hills.

Bromus diandrus Roth.
No. 4049. Berkeley Hills.

Grass. Steep banks in colonies.
Bromus villosus var. *gussonei* Koch. + *fr.*

No. 4050. Grass

Scattered individuals.

Phalaris minor Retz.
No. 4051. Grass, one of the
most abundant widely
distributed grasses in the
Berkeley Hills and in the
Bay region. = *Bromus*
hordeaceus L.

May 22, 1910.

Festuca bromoides L.
No. 4052. Grass (det. Becher Crompton, 1972)

Berkeley Hills.

Festuca myuros Linn.

Hordeum pedunculatum All. (det. Becher Crompton, 1973)
No. 4053. Grass, colonies on

wet washed hillsides or where
water has been too much for
other things - as very wet
places in roadways =

Hordeum gussoneanum Barb.

- Walked out to Fish Ranch &
turned south along the old
wagon track running towards
Moraga and go into the hills,
just north of Moraga.
The country is in fine
condition this year.

Chico

Trees of the Rancho Chico

- Big Tree, circ. ground, 13 ft.
 " 4 ft., 9 ft-10 in
 height = 85 ft

This tree stands near the entrance gate to the Rancho Chico mansion. Planted about 1868.

Another tree: circ. ground. 6 ft
 " 4 ft. - 4-6 ft.
 height - 45 ft.

The first tree stands near the street, the 2d small tree is on the main drive leading directly up to the mansion house.

On the J. R. Robinson place in town is a ^{Redwood} tree 16 ft. circ at ground, 11 ft. 4 in at 4 ft. and height of 110 ft. It is a very fine *Sequoia gigantea sempervirens*!!

May 31, 1910.

Trees in the town:

Monterey Cypress, a fine tall spreading tree:

circ ground, 15'-2"
 " 5 ft. 10-9
 height = 75 ft.

This tree is on the sw. cor. Sycamore and 4th sts on the grounds of Mrs. Somers directly on the street.

There are many trees on the Rancho Chico home grounds, planted by the general. He has a long avenue back of the house (1/2 mile long) in which a conifer and a deciduous tree alternate. The General in after

bluco

years regretted that he had not made the avenue uniformly of one kind of tree and left out the conifers. The conifers are mostly cypress. The deciduous trees were California Walnut. When the general was married he was 49, when a man waits until that age says Mrs. Royce wife of the manager, who is driving me about, he is likely to be very romantic. When Mrs. Bidwell came to the place she was struck by the beauty of the Locust bloom. Now John Bidwell could think of no better way

May 31, 1910

to show his romantic devotion to Mrs. Bidwell than to plant locust trees. And he planted miles and miles of them. They are so much inferior to the walnut that he later regretted that he had not planted the California Walnut which does splendidly here. I see many fine trees. They are tall and spreading where trained up into a street tree. Their foliage is a very rich dark green - a fine complexion for a tree in this country to have. To see if they would make timber Bidwell planted out a large grove of them. It is curious to drive through

Chico

this grove, The trees are large and tall but not a branch fit for timber to make boards, leaning, branched or crooked.

The cherry orchard is extensive. The first trees planted on the place were obtained by Bidwell from Los Angeles. He made the trip personally on horseback, there and return! securing his stock from one of the mission establishments.

Other trees are:

- Cryptomeria japonica
- Monterey Pine
- Linden - five trees.
- Italian and American ches-

May 31, 1910.

nuts. Some trees in full bloom presented a magnificent spectacle.

- Italian Cypress. Of these General Bidwell was very fond. He planted a lot of them. The snow bore down some of the limbs in the top and they don't go back. They never will go back says Mrs. Royce when snow has borne them down.

- Black Walnut California, the General planted three or four miles up Chico Creek.

- Sycamore, a fine tree on the lawn at the Mansion House. Native

- Reever who drives me about

Rancho Blanco

is cashier at the Bidwell Office.
He says horses will seek
Cal. walnut trees in preference
to other trees, on account
of the flies not being
so numerous in the
shade of such trees.

- Sir Joseph Hooker Oak.
General Bidwell said
a tree got to a certain
age and then stops
growth. But the Hooker
Oak has grown a great
deal since measured
first, allis it was
thought to have reached
its maximum size. -
Mrs. Royce.

May 31, 1910.

- Sir Joseph Hooker Oak,
measured by Colonel Royce
in Jan. 1910.

Circum. of trunk just above ground
25 ft. 7 in.

" " " 6 ft above ground.
28 ft. 4 in.

Length of principal limbs on
south side 101 + 105 ft.

Length of ^{one} limb on n. side
99 ft.

Circ. crown = 446 ft.

^{estimate}
Height = 105 ft. by ~~Shinn~~ Shinn.

Rancho Chico

Chico Forestry Station:

- *Sequoia gigantea*, a little grove of trees, 50-60 ft. h. & $1\frac{1}{2}$ - $2\frac{1}{2}$ ft. diam. A hot north wind hit them hard in July 5 or 6 years ago, some of those on the outside showing dead limbs, even great patches of brown.
- *Sequoia sempervirens*, a few trees, 80-90 ft. high. These look happier.
- Cork Oaks, a small plantation. They insist on behaving like vines, the tops turning down.
- Catalpas dying out.
- Box Elders dying out.
- Douglas Spruces, doing well.

June 1, 1910.

- *Vitis californica*, trunk 15 in. diameter, sent by Colonel Royce from Rancho Chico to State Exhibition, S.F.

(*Americus lobata* Oth.)

- Valley Oak. Colonel Royce says that large oak limbs will suddenly snap off in warm summer weather. I think he speaks of Valley Oak but possibly of Blue Oak. These are the two oaks on the Rancho Chico, very where common. I suggested that the limbs were rotten? but he replied emphatically no! that this phenomenon related to sound limbs. This is a remarkable phenomenon of which I have heard before.

Rancho Chico

in other parts of the state,
as at Ukiah.

- The Rancho Chico is a great
barony altho not like it was
in the days of General Bidwell.
A great deal of the ranch
has been sold but it is still
15 miles long and 3 or 4 miles
wide, containing some 17,000
or 18,000 acres.

Colonel Royce is in charge of it.
He has had a varied career. Some-
one in the Bidwell office asked
me what Sequoia meant. I
think it was Reeves, the cashier.
for I had been explaining to
him what a splendid thing
it would have been had
John Bidwell made known in

June 1, 1910

print his discovery in 1841 of
the Sequoia gigantea trees at
Calaveras. So I told Reeves that
Sequoia was in honor of
George Guess, the Cherokee Indian
indicating some facts of his life.
To my surprise I discovered
after a few moments that Colonel
Royce had been for 10 years U.S.
Indian agent and later had
made out a volume for the Am.
Bur. Ethnology on Indian lands &
their history, sessions, etc. It is
always disconcerting to indicate
your knowledge before an
expert who really knows what
you possess only in a superficial
way.

Chico to Paradise, Magalia,
June 2, 1910

- Butte Co. R.R. to Stirling.

The line soon strikes the low table-like foothills covered with a growth of Digger Pine and Blue Oak, for this formation a dense growth.

Above this comes in chaparral of manzanita, *Ceanothus cuneatus*, *Adenostoma fasciculatum* etc. Then a Digger Pine again mixed with a little Yellow Pine. *Ceanothus integerrimus* abundant and with the Yellow Pine through the Yellow Pine Belt. At Magalia saw a small bunch of rather scrubby but dense cypress within 500 or 600 yds of depot up-grade. About Chapparral,

Chapparral, Butte Creek, June 3,
1910.

a station and postoffice. the altitude is much higher and we get great opens in the forest, on the rocky slopes and ridges, covered with a dense growth of *Ceanothus cordulatus*, the white-flowered spiny *Ceanothus*, the stems radiating-ascending from a common basal trunk. Just above Butte Creek, and on to the summit and east slope there is a fine and entirely pure forest of Red Fir. Some of the trees are first size trees.

About Butte Creek is the Belt of Jeffrey Pine. All along the road for about four miles west,

Butte Creek

and one mile easterly, all the Jeffrey Pine trees that could be seen as we moved through the forest were blazed on 3 or 4 sides with long blazes 3 or 4 ft. long and 1 ft. broad. Only Jeffrey Pines were so blazed. The hotel-keeper at Butte Creek (where we stopped for midday meal at the most wretched table you can imagine) told me that the trees had been blazed for "abietine" purposes, that a mill for manufacturing the flow into abietine had been maintained there for some time. It was my notion that the abietine people had used "fir"

June 3, 1910.

of some species but in this locality they preyed only on Jeffrey Pine. The hotel-keeper remarked that this pine "did not grow anywhere else". And so indeed, it does not grow below ^{here} (the Yellow Pine below was not blazed), nor above here does it grow except for a mile or two, then the Red Fir in a pure stand begins.

The belts are in their extreme expression well marked here. The Red Fir is well scattered below here to be sure but above here it begins sharply and is wholly pure. There is fine Sugar Pine in the Yellow Pine belt, both west and east of summit of this range.

Big Meadows, Prattville

4300 ft.

- An extensive swamp-meadow, the coniferous forest coming right down to the swamp margin. ^{on the flats} At the upper end of the meadow rises the the bold mass of Mt. Lassen. It is an alpine mass covered with snow, rising sharply and high above the general outline of the ^{peaked} range which supports it. It is a fine sight!

June 4, 1910

- Columbine and the "4-fingered man" He (a fellow traveler) spoke of having seen 4-parted Columbines. Told him it was normally 5-fingers. He then showed his 4-fingered hand!!
- No. 4054. *Caryophyll.* Pts. white, *Stellaria longipes.* Stamens about 10. deeply bifid & lvs. midus. Runners. ~~*Cystopteris* Greene var. *hipidula* Jeps.~~
- No. 4055. *Allocarya valliscolis* (Wats.) Reck. ~~*Horkelia fusca* S. P. Tenella~~ *tenella* (Wats.) Reck. *tenella* (Wats.) Reck. *tenella* (Wats.) Reck.
- No. 4056. *Potentilla* Pts. white, *douglasii* Greene. truncate, retuse. Pine flats.
- No. 4057. *Cichoriaceae.* Pine flats. *Horkelia tridentata* Torr.
- No. 4058. *Potentilla* Pts. white, *congesta* Baill. var. *tilingii* Jeps. oblong, acute at each end, Sepals minute, (corolla-lobes) triangular-acute. Pine flats. *P. tridentata* Jeps. *calomboides* Dougl.
- No. 4059. *Clarkia*. Pts. purple, dotted darker purple. Pine flats.
- No. 4060. *Castilleja*. Pine flats. Galea very long, bright-crimson
- No. 4061. *Populus trichocarpa* T. & G. Warner Valley. Some trees show fresh shoots on lower part of trunk with narrow leaves! Crown = normal leaves.

Big Meadows

4400 ft.

- Olsen says of the twisting of pine, especially Yellow Pine, that the much twisted pine stands out alone, isolated old trees. Whereas in dense forest they are straight. I notice only twisting from right to left ^(against the sun) here. See note on June 14.

- Tamarac is used here for fencing and for fuel. It makes very satisfactory fuel, especially in the room of oak, of which there is none here and none nearer than 35(?) miles they say.

*21 is the Jeffrey Pine var. here.

June 4, 1910.

- Posts in this valley made of Incense Cedar (simply "cedar" here), last 30 years, some "will last 60 years".

- Butter firkins made of White Fir. Wood has no pitch. At Olsen's Ranch (Chester P.O.) they had piled up in their shop what looked like a great stock of wooden buckets, but both ends filled in. The first time, I think, that I had ever seen wooden firkins, at least the empty firkin.

Big Meadows to Warner

4400 ft.

5000 ft.

- The gravelly floor of the valley of Big Meadows surrounding the swamp area is mostly Jeffrey Pine and Tamarac Pine. From Chester (Olsen's Ranch) where we outfitted with animals the Jeffrey Pine continues in a fine body to Lee's Ranch in Warner Valley where we stopped all night. Saw a little *Libocedrus* ^{decurvens} not far from Olsen's at the Indian ranch and a little more comes in between Lee's Ranch and Hot Springs Valley. *Populus trichocarpa* occurs throughout Big Meadows valley but is most abundant near the upper end, thence continuing up Warner Valley

Valley, June 5, 1910.

always along streams. Between Warner Valley and Hot Springs Valley *Populus tremuloides* appears, a small bunch.

- No. 4062. *Lupinus* ^{Pine flats} ^{↑ laxiflorus Dougl.}
Fls. blue. Warner Val. ^{integerrimus Nutt. var. exaltatus Polakowsky}
- No. 4063. *Senecio*. Pine flats. Rad.
ical round leaves often very undulate margined. One plant here, another there, scattered but not rare. mollis Gray.
- No. 4064. *Wegelia* ^{Pine flats, Warner}
valley, covering tens of thousands of acres of the open *Pinus jeffreyi* area. Not going up the hill slopes ordinarily, altho one can scarcely distinguish any difference in conditions. Root

Warner Valley

5000 ft.

- of solid tissue, characteristically dark brown. See no. 4072
- No. 4065. *Campanula cordulata* Kell.
Common on the flats, Warner Valley and hillslopes as well. Also noted near Butte Creek.
- Hot Springs Valley. Branches ascending, snow-depressed.
- No. 4066. *Salix* ^{Lemmonii Benth. acc. Sch.} 10 or 12 ft. h.
bushy clumps, river bottoms swampy meadows, Warner Val. ^{The ones Salix, abundant.}
- No. 4067. *Lonicera*. Pine flats. *S. tuberosa* Torr. Warner Valley
- No. 4068. *Ranunculus occidentalis* var. ^{altissimus}
Swampy meadows, Warner Valley.
- No. 4069. *Lupinus*. Pine flats. ^{Lupinus Dougl. var. articularis gepaon.}
Warner Valley, abundant.
- No. 4070. *Mimulus*. Fls. red; lanceolate, sharply defined, yellow spot.
Torreyi Gray. Det. A. S. G. lanceolate

June 5, 1910.

- on each fold lower lip bordered by a narrow dark purple edging.
- Warner Valley. Pine flats.
- No. 4071. *Eriogonum sphaerulatum* var. ^{reddingianum}
Warner Valley, pine flats.
- No. 4072. *Balsamorhiza*
Rich pine knoll, Warner Valley, in open. Root of concentric layers which part readily, whitish.
- No. 4073. *Calochortus nudus* Wats.
Petals white, gland with a narrow pink flashing on upper side. Hot Springs Valley.
- No. 4074. *Orthocarpus hispidus* Bk.
Corolla sulphur yellow; sacs deep, teeth shorter than galea. Springy spots. Hot Springs Val.
- No. 4075. *Polygonum kelloggii* Greene
moist flats. Hot Springs Val.

Hot Springs Valley

5600 ft.

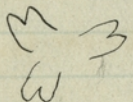
No. 4075a. *Trifolium variegatum* Nutt.
 var. *pauciflorum* Nutt.
 Hot Springs Valley. Springy
 spots.

No. 4076. *Purshia tridentata* DC.

Low spreading bush, scrubby
 habit. Petals pale yellow, filamy.

No. 4077. *Salix bidwelliae* Wats.
 = *A. gemmiparum* Wats. Hot Springs, Cal.

Per. segments pale pink, the
 lighter base with a flare of
 darker pink in the middle of
 it.



black,
 Crests dark, almost

notched so, very conspicuous,
 thin, spreading.

No. 4078. *Lappula californica* Piper.
 = *Lackelia*

Corolla pure white, crests in
 throat very conspicuous.

No. 4079. *Erythronium purpurascens* Wats.

Petals pure white, with the

June 6, 1910.

lower half sulphur yellow; anthers
 white; style entire. White of
 petals fading pink. Hot Springs

Valley. forest shade, moist-slope.
 abundant at higher alt.

No. 4080. *Callia biflora* ~~DC.~~ Howellii
 (Hook) Greene
 Seps. 6, 9, 6, 8, 6, 8, 8, 7.

Springy slope.

No. 4081. *Salix Lemmonii* Bebb acc. Schn.

The common and only willow along
 streams in Hot Springs Valley.

Same as 4066. Shrub 4-6 ft. h.

No. 4082. *P. lanuginosum* Ell. var. *fasciculatum*
 Grass. *Panicum thermale* Boland

Growing in the hot earth about the
 hot springs at the Devil's

Kitchen, the moist earth in
 which its roots grew so hot
 that I could not comfortably
 hold my hand in it.

Plumas Co

Hot Springs Valley to Lassen Peak
5600 ft.No. 4083. *Viola* ^{*bakeri Greene*} ~~*mutabilis Ph. var. linguata*~~ ^{*folia Piper*}

Pets. clear yellow, the upper not quite so distinctly veined at base as the lower. ^{dark-} Pine woods, Hot Springs Valley, slopes near.

No. 4084. *Ribes prunictum* (Roze) (Roz.).

Low spreading bush, one ft. high, but the branches longer. with

preceding

No. 4086. *Mimulus Tilingi* Regel var. *crallianus* (Greene) Gray. ^{Det. A. L. G.}

In hot earth, moist spot,

in the crater known as the Boiling Lake (Lake Tartarus).

The rocks about the spot were also hot.

No. 4085. Grass. *A. scabra* Willd. ^(det. B. Crampson, 1922) *Agrostis nemoralis* B. S. P.

In hot earth, old crater. Lake Tartarus.

No. 4087. *Ranunculus orthorhynchus* Hook. ^{swampy mdr, Hot Springs Val.}

Ghosts

June 8, 1910.

No. 4088. *Zygadenus paniculatus* Nutt. Hillside springy place near Hot Springs Valley.No. 4089. *Calystonia lanceolata* Pursh. Stamens 5; style - branches 3. Moist mountain slopes, near Lassen Peak. (where snowbanks have just gone off, Corolla pinkish-white.)No. 4090. *Abies magnifica* Mill. Seedlings. The seedlings are abundant this year. The trails as well as the slopes generally between mt. Lassen and Hot Springs Valley are covered with them in all the open or half open places. Millions of them - all conifers setting seedlings. In one place I noticed the scales and winged

Lassen Peak

seeds of Red Fir lying so thickly on the ground that the ground suggested a leaf-strewn place in autumn. The Red Fir seedlings were the most beautiful since they held their wings straight up like the banners of a host. A host that is coming to possess and populate and hold the land. The seedlings were just at the stage for this aspect, having gotten out of the ground, straightened up, the arching coté still holding the seed-case aloft by their converged tips. It was a remarkable and interesting sight

June 8, 1910.

No. 4091. *Ranunculus* ^{hartwegi Greene} ~~alishae folius~~ ^{Geyer.}
 Wet mountain meadows, lower slopes Lassen Peak.

No. 4092. *Draba aureola* Wats.

Pods on some plants nearly full-grown at this time! Only saw this, the next, and a red fl-crucifer which I did not collect, on Lassen proper, i.e. above timber line.

Growing in the rocks on the broken-rocky ^{s.e.} slopes.

Petals yellow. 9500 ft.

No. 4093. Crucifer

with preceding. Petals light yellow. *Lesquerella Kingi* Wats.

No. 4094. *Viola blanda* Wild. ^{V. macloskeyi Gray}

Pets. clear white, the middle lower petal pink-veined. moist

Lassen Peak

mountain meadows, lower slopes Lassen Peak. 8000 ft.

No. 4095. *Ranunculus alismifolius*
var. *alismellus* Gray.
With preceding. 8000 ft.

No. 4096. *Silene lemnurifolia*.
Pets. very finely cut into 4 linear segments which are again cleft or sometimes

Lower slopes Lassen in conif. woods. Dull white petals.

No. 4097. *Silene montana* Wats.

Pets. 3-cleft, ^{maroon} pink; with preceding.

No. 4098. *Lewisia triphylla* Rob.

Slopes near Hot Springs Val.
moist. One, 2 or 3 stems from a tuber.

No. 4099. *Ceanothus*.

Near Hot Springs Valley, mt. slopes coniferous woods. Fls. ^{large} pale blue.
This is a distinct thing in

June 8, 1910.

habit from *Ceanothus prostratus*, which occurs in yellow pine woods very plentifully on west slope of Sierra Nevada on our route from Starling City east. It is truly remarkable how closely and evenly *Ceanothus prostratus* hugs the ground.

No. 4099, however, while essentially prostrate has ascending branches and is not nearly so prostrate or so dense as the typical form. It ^(No. 4099) is the only form here, at least I have not observed *Ceanothus prostratus* in this region.

Lassen Peak

The spreading base of the mt. proper, lying above or on a level with lateral ranges is covered with a forest of *Tsuga Mertensiana* pure at this altitude. It forms timber but there are a few trees of *Pinus abbotianus* just at timber line, i.e. where the forest ends, but they extend in a few scattered colonies above this point forming low mats on the side of the peak itself up to nearly 10000 ft.

- Magnificent view of Shasta from summit, Salmon Alps, Mountville Butte, North Yalco Baldy, Mt. Linn, South Yalco Baldy. North east any number of low conical peaks, some-

June 8, 1910.

times with craters in their tops.

- Devils Kitchen, an often described spot, hot mud springs and small geysers, in the bottom of the cañon, 2 miles above Drake's house in Hot Springs Valley.

- Lake Tartarus, a remarkable boiling lake 300 yards long, the water so hot that you cannot hold the hand in it. Hot springs on its borders similar to those at the Devils Kitchen. Plants growing in the hot soil as noted above. Surrounded by forest, the forest descending into rim of crater.

- Below the Mt. Hemlock belt on Lassen (see above) is a distinct Red Fir belt. It has *Tsuga*

Hot Springs Valley
(5600 ft.)

Mertensiana mixed with it.
In the lower part of the Red
Fir belt we get here Pinus
monticola, its bark with
squamish plates frequently very
oak-like. Occasional Tamarac
Pine. In Hot Springs Valley
and the slopes for 500 ft.
above it we get Tamarac Pine,
Populus tremuloides, Abies concolor,
Quercus vaccinifolia, Prunus emar-
ginata,eanothus cordulatus Hall,
Alnus tenuifolia, Lonicera conjug-
ialis (black-purple fls), Gom-
phocarpus cordifolius Gray.

June 9, 1910.

deri C. & R.

- No. 4100. Umbellifer. Eulophus boloni-
Notice the old as well as the
new bulb. The new bulb will
probably be all but ex-hausted
in the seeding process. Fls. white.
No. 4101. Sedge ^{Carex abrupta}
Mackenzic. Det. H. K. M.
Common in Hot Springs Val.
No. 4102. ^{Paeonia} ~~Paeonia~~ brownii Dougl.
No. 4103. Eriogonum wsinum.
Rays ^{once} dichotomous, with bracts
at the forks. Fls. white!
No. 4104. Phacelia racemosa T. & G.
Corolla pale white, translucent
between the veins, giving it a
coralline appearance. Five
yellow glands or pits at base
inside corolla tube.
No. 4105. Galium
No. 4106. Grass. Dist. mdw.
Alopecurus amiculatus L.

King Creek to Grassy Lake

- Forest continuous of Red Fir & Tamarac which prevents one seeing the peaks or ridges about as one journeys from fork of King Creek to Grassy Lake. It is a hilly & peaky plateau to be sure but very confusing since the timbered ridges are all alike and one rarely sees an elevation.

King Creek proper is a beautiful stream, not grand or sublime, but presenting truly enchanting views as one goes up it. The gorge is a rather narrow one, the walls are often perpendicular or ^{and with pointed rocks sometimes} nearly so, and one is often and suddenly presented with a charming view of the stream bottom from some

June 10, 1910.

vantage point not far above it - a clear stream rushing over rocks through a border of freshly green willows and alders which do not obscure it. The deer brush (*Ceanothus cordulatus*) is white with bloom and sick-heavy with fragrance as on Lassen. A ^{lovely} solanaceous flower spots with white the opens in the pine forest. There is a little *Acer glabrum* at one place. The trees are *Abies concolor*, *Populus trichocarpa*, no Sugar Pine, no Douglas Fir, nor elsewhere in the region. There a great thickets of *Alnus tenuifolia* in swales. There is *Lonicera conjugialis* and *Amelanchier alnifolia*, both in flower.

Shasta Co.Grassy Lake to Snag Lake to
(7300 ft.) (6200 ft.)

Forest of White Fir, *Tamara* Pine,
Pinus monticola. The latter
with cones densely clustered in
the very top very striking

Cones only in top	{	<i>P. monticola</i>
		<i>P. lambertiana</i>
		<i>P. ponderosa</i>
Cones all over tree	{	<i>P. muiriana</i>

— *Lonicera conjugialis*, colonies
hillsides. none of it than
I have seen elsewhere. Here
1 to 2 ft. h. at Hot Springs
valley 4 ft. h.

Cinder Cone, June 11, 1910.
7200 ft.

✓ No. 4116. *Pentstemon newberryi* Gray.
corolla crimson. see next p.,
no. 5. Cinder Cone. One plant seen.

✓ No. 4117. *Pentstemon davidsonii* Greene.
Cinder Cone. One plant seen.
see next p., no. 6.

✓ No. 4118. *Ribes cereum* Dougl.
widely spreading shrub, $3\frac{1}{2}$ ft.
h; stems many from the base
ascending. Cinder Cone, base.

No. 4119. *Lonicera conjugialis*.
Snag Lake. 2 ft. h. hillsides,
open coniferous woods.

Cinder Cone
7200 ft.

Plants on Cinder Cone.

1. *Pinus murrayana*2. *Salix* sp. (California?)

A few (3-4) shrubs in crater near rim.

3. *Eriogonum*, no. 4115.

Involucral lobes reflexed.

Rim of crater and on sides, the most common species on the cone.

4. *Eriogonum* sp. Basal leaves roundish, green above, white beneath, medium infl. A few plants.5. *Pentstemon newberryi* Gray. no. 4116.

Fls. crimson. Anther pairs well protruded under upper lip. Lobes of upper lip parallel. Throat narrow.

One plant seen.

6. *Pentstemon* ^{*davidsonii* Greene.} no. 4117. Anther pairs deeper under under upper lip. Lobes

June 11, 1910

of upper lip divergent. Throat of corolla more open. Corolla lavender.
One plant seen7. *Chaenactis* sp.

A dozen plants seen.

- *Pinus murrayana* is the only pine on the ^{new} lava of Cinder Cone. It occurs mostly on the "red soil" and not on the lava proper. No tree appears to be over 20-25 yrs old at most.

- The cone is simply a conical pile of fine fire gravel, the sides perfectly smooth through sloping off by gravity. The crater is large. It has an outer rim, and a smaller rim close to outer rim, then the massive cone-shaped crater. S. + S.E. is the lava flow which extends as far as Snow Lake and Lake Bidwell.

Snag Lake

6200 ft.

- Seedlings this year. The conjunction of a good seed year with just the right seasonal conditions. The season a month early here, they say. Such a fine condition for germination may come only once in many years. Notice the stand in the forest. An old stand. A mature stand. A young stand. say 10 years old, and now a lot of seedlings.

Plumas Co. (Mt. Harkness)

June 12, 1910

- = *T. proclatens Greene*
 No. 4120. *Trifolium Kingii* Wats.
 moist cañon bottom near Mt. Harkness.
 No. 4121. *Phlox* ^{*diffusa Benth.*} ~~*douglasii Hook.*~~
 Corolla whitish-lavender, changes immediately to maroon in drying.
 Near Mt. Harkness.
 No. 4122. *Silene lemmonii* Wats.
 Corolla whitish. Petals slash-divided into 4 linear segments. Crown of 4 teeth, the two lateral smaller. Open pine woods.
 Near Mt. Harkness. Plumas Co.
 - Anglo-Saxon types in the backwoods of California: the adventurous race shows itself by going to and sticking in the mountains. The Henleys of Round Valley, the Camerons of Plumas, the Crochers & Clarks of Tuolumne and Merced, etc., etc.

Snag Lake

Snag Lake was probably made by the lava flow from Cinder Cone stopping the cañon. The lava tongue extends into the waters of the lower part of the lake. The tongue presents a very singular sight. The wall of it is so high and sharp. It is like a great coal dump. Viewed from the summit of Cinder Cone one can see the course the lava took just as one traces the course of a river.

-
- *Menyanthes trifoliata* L. East Fork King Creek towards Twin Lakes, on Cinder Cone trail from Warner Valley. See p. 118, no. 4111.

June 17, 1910.

- Juniper Lake is a large and beautiful sheet of water lying north of Mt. Harkness just above the wall which rims King Creek. It is entirely "open" now altho Gar. Olsen showed me a photograph of it taken June 24 when it was covered with snow.
- Water froze in our camp Kettle last night, at our camp between Grassy (Twin Lakes) Lake and Snag Lake.
- Met a man by name of Ed. Cameron who gave us some information about the country. He has cattle in this region.

Chester (Big Meadows).

- As we came down from Juniper Lake and neared Chester my attention was attracted to a fine new barn by the roadside. Its roof shone white like frost-work in the afternoon sun.

It was a remarkable sight that roof since the shingles were made of Sugar Pine! The up- and plates, in fact all the beams except the end uprights were hewn pieces made out of Yellow Pine. The uprights 12×12 ", the beams 12×12 ", too. The end uprights are of Incense Cedar. All the uprights straight through the middle of the barn on either side the driveway are set four feet in the ground.

June 13, 1910.

They rest on cement 4 in. thick and are lined with cement to the surface of the ground. The rafters are one piece, not spliced, made of Tamarac Pine. The whole frame is made of hewn stuff except the braces & angles which are sawn Yellow Pine (4×4 "). The boarding is sawn Yellow Pine. Inside as one looks up at the roof there are strips that glow red like fire, the places where the shingles do not quite touch the light thus sifting through the second-course shingle.

- *Pinus murrayana* trees in the meadow here full of old cones. The cones persist as long as 5 years.

Chester (Big Meadows).

- A band of 3500 sheep passed Chester this morning going East to Eagle Lake in Lassen Co. about 70 miles. It came from "the Valley" near Orland. "The Valley" here always means the Sacramento Valley. Such a band will not travel over 10 miles a day. There is a great deal of travel east-west on this road in the summer - none in the winter. A lot of it is cattle moving to summer ranges.
- Aspen and Black Cottonwood growing together along the Feather River at upper end of the meadows.

June 14, 1910

- *Juglans californica* nuts (said to be this sp. from Chico) planted here. Seedlings now up. Will they live? As much as 4 ft. snow here in winter. Sleighing right over fences. The younger Olsen says that California walnuts grow at Red Bluff and that the ground froze for two weeks last winter so hard that wagons would not sink in the mud. What is the temperature range of California walnut at endemic stations? I should say 20° to 100°. But what is the temp. range under its horticultural range in California?
- *Taraxacum dens-leonis*, a great deal of it in the meadows here. Thoroughly established.

Pratherille

4300 ft.

- Yellow Pine, twisting. Noticed two trees that twisted left to right (with the sun). I think this is more uncommon than the other way. The spiral in twisting is all the way from a very slight spiral running from base to top nearly on one side of trunk, to a spiral only 10 ft. R. on a trunk 3 1/2 ft diam. see note on June 4.

There are a few cattle farms in Big Meadows Valley. They cut hay beginning July 1. They raise potatoes, onions, radish, parsley, celery, turnips, and rhubarb but cannot raise corn or tomatoes says Nels Olsen.

June 14, 1910.

- Sugar Pine, saw a few fine trees in the forest on the low foothills toward the upper end of the valley of Big Meadows.

- Douglas Fir, considerable in forest after one passes summit going toward Greenville.

✓ No. 4123. *Lamassia quamash Greene*
Swampy meadows.

✓ No. 4124. Grass. *Koeleria cristata Pers.*
Meadows. Det. A. S. H.

✓ No. 4125. *Erigeron nevadensis Gray*
~~sp. discarded~~ Dry flats.

✓ No. 4126. Composite - *Microseris laciniata*
(det. K. (Hook.) Sch. -
Meadows. Chambers, 1956) Bip.

✓ No. 4127. *Ranunculus lemmingi*
Wet meadows. Gray

✓ No. 4128. *Cirsium lemmingi*
Heads about 6, the stem 1 1/4 ft. h.
Heads fewer as only one and often
subsessile on ground.

June 15, 1910

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Prattville, Plumas Co.

No. 4128 a. *Cirsium lanceolatum* (L.)
with 4128.No. 4129. *Castilleja* ^{Scop.} *miniata* Dougl.Fls. crimson. The meadow at
Prattville for several acres
crimson with it.No. 4130. *Gua*

Dry Mdw flats.

hallii
~~*argida*~~ *Wats.*No. 4131. *Potentilla gracilis* Dougl. var. 2Petals deep yellow, deeply
notched, broader than long;stamens about 20. = var. *hallii* Wolf.No. 4132. *Compositae* - *Scorzonella*No. 4133. *Sanguisorba* ~~*argida*~~ *occidentalis* Nutt.

Dryish mdws.

No. 4134. Grass. *Alopecurus* ^{*carolinianus* Wolf.} ~~*californicus*~~
(Det. Beecher Crampton, Mar. 72)
~~former var. mdws.~~ Det. A. S. H.No. 4135. *Mimulus* *primuloides*
mdws.

Leaving Prattville by stage we
traveled southerly to Mountain View,
a station on the South Fork Feather
where it turns from Big Meadows to
cut westerly through the Sierra
divide. We climbed to the summit
which is not very high and
then descended to Indian Valley
(where there is a sawmill which
supplies Big Meadows farmers with
boards), thence to Greenville which is
a considerable town for this region. It
has an old brick structure or two
built in gold days fashion. None
here. The leading merchant and
Wells Fargo agent, J. N. Murray,
saw me changing plants and
wanted to know if an introduced
thistle at Greenville were the real

Prattville to Keddie

Scotch thistle.

Left Greenville at 1.00 o'clock,
saw Taylorsville in a ^(see.) corner of
the Indian valley, prettily situated,
just before reaching Crescent Mills.
Next Indian Falls (formerly Shoo
Fly) which is on the Indian Creek,
Branch of the Fialler North Fork.
Then along this stream, cross-
ing it and passing to Spanish
Creek (its tributary) to Keddie on
the W. P. R. R..

Crescent Mills is a small
decayed hamlet with a small
general store and post office
and two saloons. It once had
a flour mill which supplied

June 15, 1910.

Greenville and the surrounding
country.

- At Keddie we found a store where
we bought a few things for our camp
from a very surly storekeeper. One
can never understand why a man
who has things to sell should value
surliness so highly. But then if it
were not so this man would not be
a storekeeper in Keddie. Just above
us was a permanent camp. A woman
a little past middle age was
there, a face that had seen hardships
- a kindly old soul indeed, who
took a most friendly interest in
us, gave us a plate of cookies!
("she had never made such fine ones")
which were most excellent and
a dish of stewed peaches!

Keddie to Quincy, ret
(3200 ft.) (3400 ft.)

No. 4136. Grass. ^{= Holcus} *Notholcus lanatus*
Near Keddie. (L) Nash.

No. 4137. Composite.

Dry open pine tillerides
Keddie.

No. 4138. *Phacelia virgata* Greene.
with preceding: *P. magellanica* var.
heterophylla (Ph.).

No. 4139. *Eriogonum nudum*
var. *oblongifolium*
with preceding

No. 4140. Sedge. *Carex feta* Bailey.
Quincy.

No. 4141. *Hosackia bicolor* Dougl.
Quincy. = *Isotria pinnatis* Hook.

No. 4142. *Mimulus guttatus* DC.
Quincy. wet meadows.

No. 4143. *Myethia*
Moist flat. Quincy.

No. 4144. *Iris hartwegii* Baker.
Pine flats. Quincy.

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No. 4145. Grass. *Sitanion jubatum*
J. & S. Pine flats. Quincy.

No. 4146. *Brodiaea multiflora* Benth.
^{= *Dichelostemma*}
Pine tillerides of flats. Quincy.

No. 4147. *Trifolium breweri* Wats.
Flat on ground. Pine opens.

Corolla whitest with a faint
pink tinge at end of banners.
Flowers turned opposite (to one side)
after anthesis. "When finished
they are just behind"

No. 4148. Sedge. *Carex stipata*
Muhl. Quincy. *polyphyllus* Lindl.

No. 4149. *Lupinus* Moist meadow
flats. A lot of it: 3-4 ft. h.
Fls blue, whitish in center of
banner.

Keddie to Belden

- Walked from Keddie to Quincy in a trifle over two hours. Quincy is a pretty town, pleasantly situated in the American Valley; its business building facing the Courthouse square with its trees, grass and interesting old courthouse, greek columns in front and a little bell and flagpole on the roof. The town is very neat and well kept. The residences are tasteful, and everything in spick-span order. As Ryder said: they looked as though they were trying to be respectable rather than big. Everyone was as polite and considerate as if we had come dressed

June 17, 1910.

in our Sunday best instead of in tramping clothes. At the Plummer House where we made our headquarters, sitting in the chairs on the porch and reading the last S.F. newspapers, we had dinner in a large old-fashioned airy dining room, clean, well-ordered, chromos famous fifty-years ago on the walls and ^{copies of} which I had not seen since a small child. And the dinner - the most important thing to us who brought to it a sharpened appetite - was most excellent, the dishes well-cooked and well-served. Indeed the memory of the dinner is to be a topic of conversation and a standard for things generally for some time.

Belden, Plumas Co.
(about 2200 ft. alt.)

Plants noted: -

- *Vitis californica* Bth.
- *Ceanothus integerrimus* H. & A.
- *Asclepias mexicana* Baw.
- *Quercus californica*
- *Calycanthus occidentalis*
- *Acer macrophyllum*
- *Fraxinus oregona*
- *Rhus diversiloba*
- *Quercus chrysolepis*
- *Pinus ponderosa* Dougl.
- *Asclepias speciosa* Torr.
- ✓ - *Aralia californica*
- *Prunus subcordata*.
- *Pseudotsuga taxifolia*.
- There is a store at Belden - an Indian and his wife keep it.
- There is also a famous soda spring which is very good.

June 18 - 1910.

Det. A. L. G.

No. 4150. *Mimulus leptanthus* (Nutt.) Grant.

Corolla large, each lobe of both upper and lower lip deeply lobed.

Color a ^{very} pale cream-yellow.

No. 4151. *Eriogonum vimineum*. ^{Belden}

✓ - grows on steep shaly hillside under oak etc. Belden

✓ No. 4152. *Philadelphus lewisii* Pursh.
var. *californicus* Gray.

Canon at Belden.

No. 4153. *Quercus breweri*
Belden

- Belden is in the Canon of the North Fork near the bottom of the canon.
↑ Feather River

Big Bar to Oroville

- From Belden we continued to follow down the cañon of the north-fork of Feather River, the n.r. some 50 or 100 feet above the cañon bottom.

Above Big Bar a short distance mixed woods begin and continue with great uniformity. These woods are very marked in character, they are rather dense, the mixture running very uniformly and consisting of Douglas Fir, Black Oak, Maul Oak and Yellow Pine. The Douglas Fir is more common in the mixture than the yellow Pine, at least about or below Intake. There is some

June 18, 1910.

Madroña about Big Bar and the amount increases toward Intake where there is enough of it to be a feature. Whether it extends high up the cañon walls I cannot say. Between Intake and Outtake the coniferæ of the Transition Zone disappear entirely. Below Outtake all Digger Pine was my first-note. However the main stand is Digger Pine. A little further down on the way to Oroville (we have now come out of the main cañon) and the country is more open), there is a tremendous stand of Digger Pine. It is young,

Oroville

say 10 to 15 years old. This young stand has a little young Yellow Pine mixed with it. "Intake" station on the Western Pacific R.R., referred to above, is at the beginning of the Big Bend, North Fork of the Feather River. Outtake is a point referred to in these notes as the pour house where the water comes out of the pipes at the lower end of the Big Bend. It is not a railway station and this is simply my name for it to mark a geographical point. It is only a short distance below Bidwell station ^{on} the r.r.

June 19, 1910.

The outtake referred to on prev. p. 148 probably has a distinctive name.

- *Achlys triphylla*! sent from Happy Camp by James W. Kiehn, circa 1910.

Berkeley

- *Pinus tuberculata*. A band of this on the slate zone some (8) ? or (4) ? miles n. of Placerville - Miss ^{Margaret} Kelley, Summer School student.

- San Benito Co. ranches =

1. Rancho Cienega de los Paicines, Vasquez the bandit

Tully; Rose of the Rancho 10,000 acres.

Spanish grant to Castro Family in 1842.

2. Téguerezinta Rancho, 10,000 A.

3. Quismes Rancho, 19,000 A.

- S. F. Examiner. July 28, 1910.

- Clark, Galen, sketch of in Sierra Club Bull. June, 1910.

July 11, 1910

- Plants sent by ^{M.B.} Richter from Elk Grove.

5. *Jussiaea californica*.

4. *Cirsium lanceolatum* Scop.

3. *Hemizonia virgata* Gray.

2. *Melilotus indica*.

1. *Medicago lupulina*

All the above are Honey plants sent July 11, 1910.

No 4 " puts in its appearance first, four years ago " - Elk Grove farmer.

No. 5. " Beekeepers call it a sort of water-lily "

M.B. Richter in litt.

- Yellow pine seedlings in Bot. Gard. from Shasta, Cal. = 9, 10, 9, 9, 8.

Pinus ponderosa

Berkeley

- *Umbellularia californica*. F.W. Wright says: We used the wood for sled-runners in making sleds for sledding wood down hill in Monterey County, because the wood is so hard. -
- *Quercus lobata*, falling limbs. Wright says limbs often fall and kill people, that he had a great oak in his yard at Calistoga which for that reason he took out, that one of a party of women near Middleton was killed by a falling limb, the rest of the party ran but she hesitated a moment and was lost. See 3 pp. ahead.

July 24, 1910.
Mt. Tamaulpais.

- Mt. Tamaulpais trip with Summer School students: - July 23.
- *Castanopsis chrysophylla* var. *minor*. Fruits rather large but not hardened. Lobes of involucre very long and narrow, the lobes 3, sometimes a very small 4th or 5th lobe. The lobes seemed to me remarkably long and narrow, but they may widen before maturity.
 - *Stenotus linearifolius*. It is called Indian Broom say Mrs. Bogan of Tucson, Ariz., the natives using the broom-like tops. The name is very appropriate but am not sure she has the same

Berkeley

thing in mind. Her botanical observation is not very accurate.

- *Hypericum concinnum*, stamens in 3 clusters, very marked, especially in withering flower. In each cluster 4 of the filaments are ^{distinctly} united at base, the others free!

Styles 3, slender, spreading horizontally & widely. - Mt. Tamalpais.

- *Aralia californica*, 8 ft. h. styles 5! petals white, closely reflexed! - Mt. Tamalpais.

July 26, 1910.

- *Quercus lobata*, falling limbs W. H. Dwight says: Limbs fall in hot dry summer weather on perfectly still days. He suggests that it is due to there being so little sap, that the limb as it were dries up.

See 3 pp. back.

- *Mentzelia Lindleyi* - called "Buena-Muger" by Spanish Mexicans, says ^{one} of the Summer School students because ^{the} sticky leaves clinging to one!

- *Eriogonum*, a great array of species in and about Jolon. - Go from July 15 to Aug 10 - Miss Lerla Hubbard.

Berkeley

No. 4154. *Rhus diversiloba*
Strawberry Cañon, July 27, '10

No. 4155. *Sambucus glauca*.
Trees in Strawberry very
heavy with fruit. The dense
bloom is white rather than
blue and is black beneath
the bloom. Strawberry Cañon,
July 27.

- *Bupressus sargentii* (?). Six
miles north of Fairfax on the
Little Carson Creek grows a bunch
of cypress. Go to top and over
a gap to a plateau beyond -
the cypress is on ^{rolling} the plateau. -
A. H. Allen, June, '10.

July, 1910.

- M. L. Richter says:

"Buckwheat", Dwarf" is a name
for a scrub plant 6-12 in. h.,
white and pink fuzzy bloom
at San Diego, Sept-Nov.

Rhus diversiloba, a bee plant,
the honey from it is of very
good grade, and carries no
poison. Sold on a commercial
scale.

- *Pinus ponderosa* seed from
Mt Shasta, Forest Service, cots=
9, 10, 9, 9, 8. - Bot. Gard.
seedlings.

- *Calycadenia hirsuta* Greene
at water, Kern Co, Sept. 20, 1881,
Greene in Cal. Acad. 46, also Tehach-
api, Kern Co. K.C. Sept. '83 - Noted
by H. L. J.

Berkeley

- *Quercus Morehu* is near Auburn. - Dr. Hawver.
- Née, Luis, the first to publish scientific descriptions of California Trees.
- Falling limbs of native oaks. A. J. Pieters has just returned from the Chico Introd. Garden. Says Van Vleet showed him a big limb fallen from a Valley Oak (*lobata*) on a calm hot day. The limb was quite sound or in any event apparently sound.
- *Phyllospadi*, used in fireproofing and deadening between walls in construction of Rudolf Spruck's Physiological Laboratory in 1903.

July, 1910.

- *Torreya Californica*, Buck Creek, Middle Fork Kaweah, 6000 ft, Miss K. D. Jones.
 - Also in Lake Co, Miss Harmon.
 - Fog-banks on Vaca Mts. These mts. are opposite inmost tongue of Redwood (on Howell Mt.). About 25-30 days in the year sea-fog comes in to the top of the Vaca mts in the morning remaining only a short time. - There is a record of this in some previous book - about 1904.
-
- *Quercus agrifolia* Née. Bridwell, Entomologist, says Live Oaks have been cut off at the trunk and "balled" by carpenter worms, in the country beyond Mills College. Noted lately. - Aug. 9, '10

Berkeley

- Sequoia gigantea on Redwood Creek.
A.H. Allen says Hopping is authority for the statement that there are 40-50 acres of pure stand on Redwood Creek, the only pure stand that he knows.
(Hopping)

- Murray, Wm., Calif. collector, discoverer of Cupressus menziesiana, "was a great scientific man. Had a thorough training; was State botanist a while; had a brother who was a famous geologist. Had a bank in S.F. Agent of the Rothschilds in Mexico, etc, etc". - Says Miss Kellogg. I have taken down essentially all Miss Kellogg said without regard to its accuracy. Some of the alleged facts are obviously wrong. He was an old man when he married and a daughter, Miss Anita Murray, is still living at Carmel or Seaside.

August 2, 1910.

- A. J. Reeks, has been coll. oaks for histological study. He is nearly my height, thin ^{face} ^{wrinkled}, prematurely, about eyes & cheeks, full brown beard, blue eye, pleasant manner. Seems a good observer & makes a favorable impression. Said he left Govt. Service because every scientific man shunted off into administrative work, caught the fever for building up an "office". Any number of men trained by Kevin Smith split off in that way and "developed" a "section" or "office". Most of their time taken in pulling for more appropriation for extension of their work. About

Berkeley

1200 men now in Bureau of Plant Industry counting clerks! In 1896 when I was in Wash.

I met nearly every botanist! Smith almost alone has refused to be drawn into administrative work. In

spite of this continued log-rolling for more money there is no dishonesty. The men are honest and get none of it. It is pulled for to "extend" their work and they have to be continually writing reports to show its importance.

Peters just now going to Yosemite. Then to Loma Vista Southern Calif. to see Prof.

August 2, 1910.

Nolney Spaulding, his old prof. at Michigan.

- *Eucalyptus globulus*, - James Marshall says: wood burns well and has no borers!

- Vacaville, Sept. '10. Perhaps the wood burns better at Vacaville because it gets so thoroughly dried out at that place in the long hot dry summers whereas at Berkeley the wood holds moisture.

- "Bright, W. F., now in U.S. Dept. Agr. in charge of the economic herbarium. Comes in to see me once a year about. Was the man who wrote the paper on new *Galium* spp." - H. M. Hall, Sept. 10

Berkeley

- *Eryngium articulatum*
Deer Creek, Consumnes River
a fine br.-plant, called "Blue
Thistle" - M.C. Richter. *Bees*
- *Stachys ajugoides*, a br
plant, Sac. Co. - M.C. Richter
- *Solidago occidentalis*, ditto
- *Floerkea douglasii* cult. in
England as a honey plant, acc.
to M.C. Richter.
- *Polygonum lapathifolium*
br.-plant in Sac Co, but *punctatum*
far more important in Yolo
and Colusa. - M.C. Richter
- *Trichostema lanceolatum*:
"Mustang", name of the folk
(M.C. Richter, Sac. Co. name)
basis of "Mustang Liniment"

August 8, 1910.

- *Eryngium articulatum* Hook.
Bees will gather 100 lbs to
the hive between now and
end of season. Yes, there
is a lot of it in the low
lands along the sloughs
western Sacramento Co. -
M.C. Richter. It has a very
disagreeable odor - strong
as and like unto ammonia.
- *Polygonum punctatum*, yields
as much honey as alfalfa.
- M.C. Richter.

Berkeley

- Dr. Ki-ichi Miyake,
Lecturer in Botany in the
Imperial University, Tokyo,
Japan, called today. I
showed him the laboratories
in botany and the botanical
garden. He was interested in
our specimen of the Big
Tree near the Conservatory.
At a little distance it looked
to him like *Cryptomeria*
japonica and only when
he drew near and
examined the foliage did
it show to be Big Tree. He
says *Cryptomeria japonica*
does not stump-sprout, a
fact on which I had
never before had a definite

August 12, 1910.

statement. It is one of their
forest trees in their planted
forests and most of
their forests are planted.
This and one other species
(I have forgotten) make up
most of the forest.

Dr. Miyake is a very
pleasant and agreeable
gentleman. Was at Cornell
under Atkinson. Like all
Orientals or indeed all
foreigners he makes one
ashamed of one's manners.
The salaam he made when I
presented a copy of my "Trees of
California" to him was quite
remarkable. It was in itself
worth the giving the book.

Berkeley to Halfmoon Bay

- Hills from San Francisco south to Halfmoon mainly barren, totally of hees, a low scrub painting one or two sides of the back cañons - *Baccharis* and many semi-shrubby things.
- Pyder, Professor of Sanskrit, my companion. P.A.W.
- At Halfmoon ^{Bay} in a creek bed are *Salix lasiandra*, *Populus trichocarpa*, *Scrophularia californica* (8 ft. h.), *Urtica californica* Greene (6 ft. h.). Redwood is seen from Halfmoon both east and northwest as a grizzly fringe coming over the crests and saddles from the east. The barren hills seem to extend further and further back as one goes south along the Coast

August 17, 1910.

Tunitas Creek, San Mateo Co.

The low (heath-like at distance) brush is of the following shrubby, half-shrubby and herbaceous species:

- *Rhus diversiloba*
 - *Heracleum lanatum* Michx.
 - *Diplacus glutinosus* Nutt.
 - *Pteris aquilina*
 - *Artemisia heterophylla*
 - *Rubus vitifolius*
 - *Eriophyllum staechadifolium*
- The above species were noted at Tunitas Creek.

- *Lupinus arboreus* - Tunitas Creek

- No. 4156. *Oenothera* ^{*grandiflora* Ait.} *Purissima* ^(O. purpurea T. & G.) Creek.
- No. 4157. *Sambucus callicarpa*.
- No. 4158. *Astroagalus* 3 ft. h. ^{*Apocynatachys* group.} ^{Tunitas Creek.} ^{Banner white, the wings faint yellow. Sides Banner neapolit.}

San Gregorio

- San Gregorio Valley presents a rather pleasing prospect as one looks up it from the hill road leading down into the village of San Gregorio. There is a hospitable looking hotel set behind a row of fine box elders. We got in at 5:10 but by 6:30 we had not succeeded, after several requests, in being shown rooms, nor did there seem any especial prospect of supper. So we decided to hike on to Pescadero. As we hiked up the hill a man driving a spring wagon with a good team overtook us, invited us to ride, which we were not slow to accept

August 17, 1910.

in spite of the fact that he was uproariously drunk, shouting to the horses and passersby and swearing continuously - all the while in capital humor doing and saying the very foolish things suitable to a drunken man. "Can't I go home? Can't I drive on the road, as much mine as the automobiles? etc." He finally told Ryder to drive and I shall never forget his slapping Ryder fraternally on the back: "You'll make a hell of a teamster! All right, my boy! Go it! You're my chief!" The Professor of Sanskrit took it all in good part and after a burst of words

Pescadero, San Mateo Co.

from the bibulous are said:
 I wish he'd review Lomen's
 eyes! The main name was
 Ballard - the owner of a
 considerable ranch $13\frac{1}{4}$ mi.
 n. of Pescadero.
 * 2400 acres!

- Pescadero Creek is lined
 with a rather good growth
 of *Acer californicum*, *Populus*
trichocarpa, *Thuus oregona*.
 A little south on the Butano
 (Creek) there is a low valley
 flat (old river bottom) of
 perhaps 100 acres pretty well
 filled up with the above
 species and with willows.

- *Pinus radiata*, fine tree 75 ft. h.,
 4 ft. diam at 3 ft., elliptical, 42 years old,
 in hotel grounds (broadly) at Pescadero.

August 18, 1910.

We passed south through the
 narrow cañons of the inner
 hills, not along the coast
 road, coming out along Gazos
 Creek to its mouth, then along
 the coast road to Whitehouse
 Creek where we had a view
 over the country to Año Nuevo
 Pt. and its lighthouse and
 south easterly to Finney Creek. At
 Año Nuevo Creek or a little this
 side of it the Monterey Pine is
 seen on a hillslope, a colony
 of 8 or 10 acres of it, above the
 road which is on the flat.
 This colony is continuous south-
 ward and runs down to the
 road along Año Nuevo Creek.
 The trees are mostly large

Pescadero, Gazos Creek, Año Nuevo Creek, Waddell Cr., Scott Cr.

but not so very tall. There is ample reproduction. Along the mountain side they continue southward, coming down to the sea in thin lines along two creeks (one of these being Finney Creek). A little south of Finney Creek the wagon road drops to the beach on account of high cliffs which here rise from the sand of the ocean shore. All along the top of this cliff and on the face of it are the Monterey Pines, presenting a most picturesque spectacle to the wayfarer below. From the summit of this mountainous cliff they descend nearly to the floor of the cañon-valley

to Swanton
Aug. 18, 1910.

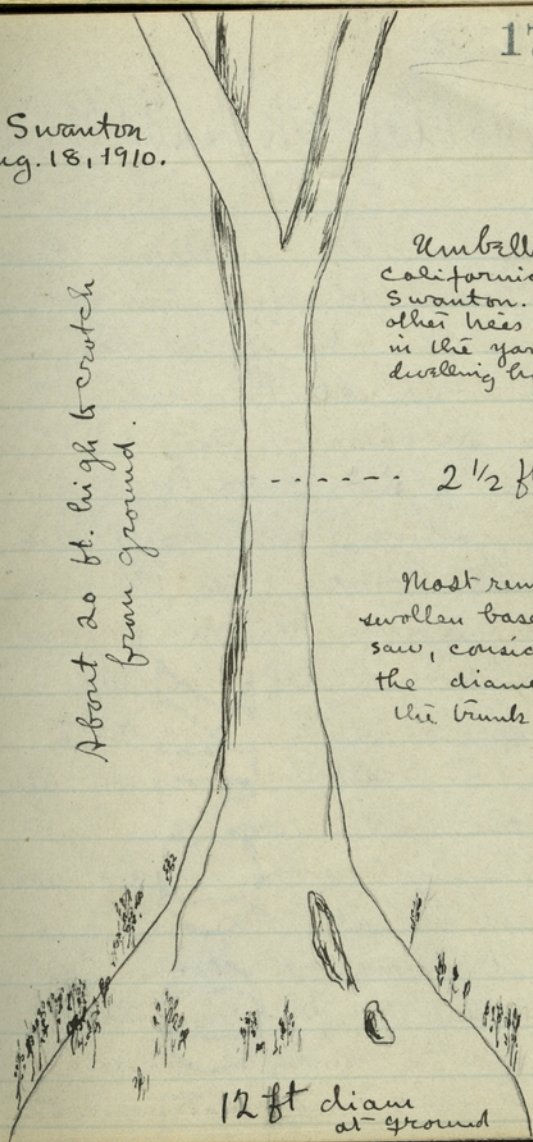
About 20 ft. high to crotch
from ground.

Umbellularia
californica at
Swanton. Several
other trees like this
in the yard of the
dwelling house.

----- 2 1/2 ft diam.

Most remarkably
swollen bases I ever
saw, considering
the diameter of
the trunk above.

12 ft diam
at ground



Año Nuevo Bk, Waddell Ck

of the Waddell, a stream which here breaks sharply and narrowly the continuity of the range lying against the ocean. The pines reappear on the south wall of the Waddell cañon and continue southward along the ocean ridge for $1\frac{1}{2}$ miles then crossing the ridge and descending half-way (or perhaps a little more) to the floor of Scott Valley cañon. After they cross the ridge and get down a little distance they are associated with Redwood and with Madrona. Probably not elsewhere is Monterey Pine associated with Madrona, and certainly not elsewhere

August 18, 1910.

- with Redwood. See ahead 2 pp.
- Buckeye was in flower on Gajos Creek. These leafy trees were in pointed contrast to the trees seen a few days ago in the Benicia Hills facing the Suisun marshes, stark naked like skeletons.
 - Beach plants at Año Nuevo Beach near mouth of Waddell Ck.
 - *Cakile edentula*
 - *Mesembryanthemum aegyptiacum*
 - *Abronia umbellata* (purple fl.)
 - This whole coast line is cut crosswise by sharp cañons or cañadae. Between Little Butano and Gajos creeks one walks across a flat between the hills and within 10 ft. suddenly came upon a farmstead of half-a-dozen buildings lying in a cañada that we not only did not see across the plain but did not suspect its existence.

Pescadero, Butano Cr, Gazos Cr.
 Año Nuevo Cr. to Swanton.
 San Mateo Co.

No. 4159. *Polygonum punctatum*
 Stamens 8 (2 counts). Butano
 Creek, San Mateo Co. Swamp.

No. 4160. *Sparganium greenii*
 with preceding. Morning.

No. 4161. *Hydrocotyle ranunculoides*
 L.f. with preceding.

No. 4162. *Senecio hydrophilus* Nutt.
 5 ft. tall. Low valley floor
 of the Butano.

No. 4163. *Solidago*
 with preceding. 3 1/2 ft. h.

No. 4164. *Corydon cespitosa* Haw.
 Flowers pale lemon yellow.

Petals rather strongly
 thickened on back of
 midnerve. Gazos Creek.

No. 4165. *Polygomon natans* L.
 Whitehouse Creek. San Mateo Co.

Aug. 18, 1910.

No. 4166. *Pinus radiata* Don.

Año Nuevo Creek. I had expected
 to find this pine at Pescadero as per the books,
 but I saw nothing of it. The country is
 entirely barren near the sea and if there
 were a bunch of pines one ought to be
 able to see them. I followed the inner road
 (3 miles from shore) down the coast as far
 as Gazos Cr., then out to the coast. On the
 inner road we passed near the tongue of
 Redwood and Douglas Fir which came out from
 the main body, but at the mouth of
 Gazos Cr. we surveyed perfectly barren
 country about Pigeon Pt. light, north
 and especially south, for on account of
 the headlands one can not see far north.
 going down off the table-land at White-
 house Cr. one passes across a great
 flat lying back of Año Nuevo Pt. and
 then at or just south of Greenoaks Cr.
 one sees the Monterey Pines. This is 10
 miles in an air line from Pescadero and
 15 by the coast. South of Pinny Creek the
 beach is bounded by cliffs 400 to 500 ft. h.
 on the face and top of which the pines cling
 making a strong impression on one standing on
 the sea shore.

No. 4167. *Eriogonum latifolium*.
 Sea beach just south of
 Año Nuevo Pt.

180 Swanton to Santa Cruz to

No. 4168. ^{negundo var.} *Acer californicum*
Scott Creek at Swanton.

No. 4169. *Rhus diversiloba* T. & G.
Felton. Shade of forest.

No. 4170. *Rhus diversiloba*.

Felton. Climbing a fir tree.

No. 4171. *Prunus ilicifolia* Walp.

Alma (given me by a
passenger on the train.)
Santa Clara Co.

- *Acer californicum*, great lot of
it scattered along San
Lorenzo R. between Santa
Cruz and Felton.

- *Pseudotsuga taxifolia*,
Sequoia sempervirens and
Quercus densiflora - these
three seem to be the

Felton, Aug. 18, 1910.

prevailing species between
Santa Cruz and Glenwood or
Laurel on west slope of
Santa Cruz Mts. as seen
from the railroad train.
- *eanothus thyrsiflorus*, some-
times a tree but unusually!

- *Sambucus callicarpa*, also
at Pescadero and Gajos creeks.

- The people who came to visit the
grove of Big Redwood trees at Felton
struck us by their actions in one parti-
cular. They came in, in little parties of 2
to 10, and went straight to certain
trees and began reading the visitors
cards tacked on the trees by the thousands.
- cards of tailors at Santa Cruz, bakers
at San Jose, shop-keepers from San
Francisco and members of the Order of
the Screaming Eagle from Kansas etc. Miss
Alice Hilgard says the Switzerland scenery is
admired because of its human interest.

Berkeley

- Birchner, Victor. Young German, studied with Pfeffer at Leipzig; has worked on the fruit farm of J.H. Barber ten miles up the Carmel Valley. Barber gets no time for botany now, but is making money on his fruit which goes to New York. Birchner collected ^{native} plants on the Bernick Ranch of Barber and has a genuine interest evidently in the native botany and has brought me a list of plants "collected on or near the Bernick Ranch, March - July, 1910". Birchner, as so many, was much troubled by Poison Oak. He used soda in hot water as a wash which

August 20, 1910.

he says prevented it from spreading - "kept it down". An indian told him to wash with a decoction of *Solanum xanti* (*umbelliferum*) foliage adding a little salt. - And I may add that Professor Hilgard told me last night that the scarlet (autumnal) leaves would not injure any one if eaten. The theory that a person can be made immune by eating the green leaves is fallacious. Miss Day told of (I think Mrs. Stringham) eating the green leaves three or four days before her wedding. As a result she was taken out of bed

Berkeley

and put into a chair to be married and then put back to bed. - I spoke of the prevalence of botanical knowledge in Germany to Borchner, at least they know what a botanist is. He replied that the statement was peculiarly true of Thuringia which is a very fine botanical ground and where every man is a botanist and knows the ^{Latin} names of the wild plants.

-
- *Aralia californica*, Strawberry Cañon main south fork just above Nick Ranch. (Old record, but observed by me).

August 24, 1910.

Carex barbarae Dewey.
Carex laciniata Boott.

- No. 4172. Sedge. | Berkeley Hills, Telegraph Cañon (Clement Creek), toward head.
- *Cupressus macrocarpa* says Miss Louise Hilgard grows near Black Butte.
- Prof. E. W. Hilgard.
- *Darlingtonia californica*, "struck me in the face as I walked through them", E. W. Hilgard, Illinois River in S. Oregon, about 30 yrs ago. I never heard of them so tall. Small ones 3 ft. at extreme.
- Mason, U.S. Dept. Agr. man working on native *Dryas* in Southern Calif. with a view to getting grafting stock - H. M. Hall, Sept., 1910.
- Ash. This tree never struck by lightning. - F. F. Thomas. I think he refers to the eastern U.S.

Berkeley

- "About 50 people in the Sierra Club were using your Tree Book on this summers outing" - H. H. Allen.

- "Everybody in Yosemite want around hugging your nice yellow book" - Miss Crane.

- "Seemed to me everybody in Yosemite had your book" - Mrs. Hengstler.

That is all that needs, that it be useful, that it help the people to study and appreciate the native trees.

- "Everybody in Yosemite was using your book - carrying it under their arm" - Miss Brown.

- Your book was a joy. We used it all summer in the mts. - Hazel Hobson Boag.

August 26, 1910

- James Davis, the packer and camp-boy on the Mammoth River Expedition of 1907, has come to Berkeley and is now a freshman. His comments upon city life are amusing and fresh. He thinks life in the forest has many advantages over city life.

As to the fire prevention practice of the Forest Service he disagrees. The rangers keep out the fire, yes. But the accumulation of litter in the forest is about 4 in. a year. At the end of 4 or 5 years it is pretty thick. I know a place where the litter is 18 in. thick after about 5 years. Now

Berkeley

when a fire really gets started there nothing can stop it. It is impossible. It digs down into the ground and injures the trees more than a surface fire which runs over the ground every year and doesn't injure the big trees at all. Firing should be under control of course. Give the head rangers enough men and let them burn in the fall and spring. There are certain times of year when fires won't work out of the forest. Furthermore burning ^(chaparral) of brush land is good because ^{burned} brush is usually followed by grass and trees. This is the first time

August 26, 1910.

Jimmie has seen a city. He is amazed and utterly unprepared to find S.F. so filthy! This is natural since he comes from the forest! He is also amazed and annoyed at the continuous noise! after the peace and silence of the forest!

I do not know how he will stand the temptations of this place but he has determination. He told Nealson* that he would not go on the pack train as bill-boy unless he would promise not to make him drink any whiskey! It would be better if Jimmie were to go to college to a small college where there

* A famous packer to the gold mines.

Berkeley

is an atmosphere of work and where certain personal ideals of conduct and habit are sharply and clearly established. Here he is ^{one in} a raw mob of a freshman class 1000 strong!

Jimmie tells a story of my friend ^{Geo. D.} Butler. A prospector by name of ^{the lawyer in Yreka.} Nussick, grub-staked by a merchant (Tetheroz), discovered a rich gold mine. He came back and reported no find, and went out again on his own account and worked his mine, making big money. Tetheroz brought suit, proved fraud, got the mine but of course "those Yreka lawyers who hog everything in the county" came in for a

Sept-5, 1910.

share. Butler got $\frac{1}{8}$ (or $\frac{1}{4}$); O'Neil, Butler partner, the same; Jimmie says the gold is practically free gold and is taken out in immense chunks - and that much of it is sent direct to the S.F. mint without milling!

^{Geo. D.} - Today comes in to call Butler who says: *Polemonium humile* is very neplitic!! *Cupressus macrabiaria* or Joosenest Mt. two locs. in foothills, one west, one (east?). The old cones are all closed, but after taking a branch home the cones open and the seeds shell out on the paper. Butler speaks of three ^{exotic} trees as "spontaneous" at Yreka

Berkeley

When I quiz him I doubt its being anything more than root-sprouting from planted trees. Populus alba, planted 50 years ago, 2 ft. diam, fine large trees, now sprouting for 200 feet about old trees. Black Locust- (Robinia pseud-acacia) propagates likewise. Also the Honey Locust (Gleditsia triacanthos) which has "thorns much larger than on trees in the Mississippi Valley. Busick has given his herbarium to the State Univ. of Oregon at Eugene; he has quit collecting on account of advanced age and is now employed as a

Sept 5, 1910.

curator in the herbarium.

Butler gave up botany in his youth because he did not have time for it.

The temptation to resume it he avoided for some 30 years. In ^{June} 1907 he was here in Oakland and turning over books in a second-hand shop he chanced on a copy of the Flora of Western Middle Calif. He bought it and thought he would see what he could do with it. On June 20 he made his first determinations, in Siskiyou, after so long an interval!

- Douglas Fir, healed over stumps say within 10-15 miles of Sacramento and Pitt rivers junction. - Ber. Wred, Sept, 15, 1910. "On Squaw Cr."

Spool No. 1

- No. 1. Live Oak Mandblow - Munkin
 11 - $\frac{1}{38}$
 No. 2. Ditto " " 16 - $\frac{1}{25}$
 No. 3. " " 12 - $\frac{1}{46}$
 No. 4. Monterey Pine 16 - $\frac{1}{50}$
 No. 5. " " 11 - $\frac{1}{50}$
 No. 6. " Cypress 16 - $\frac{1}{50}$ Pescadero

Spool No. 2

- 42
 - No. 1. Munt. Cypress. 14 - $\frac{1}{50}$ 38 ft. h.
 8 ft. bin. circ @ 4 $\frac{1}{2}$ ft.
 No. 2. munt cy. cy. Pt. 11 - $\frac{1}{50}$ 38 ft. h.
 2 ft. diam.
 No. 3. Cypress Pt. near Ostrich Trn
 40-55 ft. h. 1 $\frac{1}{2}$ to 2 $\frac{1}{2}$ ft. diam
 11 - $\frac{1}{50}$
 No. 4. Cypress Pt. 11 - $\frac{1}{50}$ 45 ft. h.
 No. 5. " " " 3 ft. diam
 5-5 ft. h. 1-3 ft. diam.
 No. 6. Cypress Pt. 11 - $\frac{1}{50}$ - 20 ft. circ
 65 ft. h.

Spool No. 3

- No. 1. Cypress between Mandways
 11 - $\frac{1}{25}$ - 30 ft. h.
 No. 2. " 16 - $\frac{1}{25}$ - 30 ft.
 9 ft. 1 in.
 No. 3. 11 - $\frac{1}{15}$ cloudy valley
 Oak which. Tree 60 ft
 high. $\frac{1}{30}$ ft. diam at 1 ft.
 No. 4. Ditto describe tree on
 p. 11 - $\frac{1}{10}$
 No. 5. Ditto. 14 - $\frac{1}{25}$
 No. 5. " 16 - $\frac{1}{25}$
 No. 6. " Talmado Rd 11 - $\frac{1}{25}$
 Diam 1 $\frac{1}{2}$ ft at 1 ft.
 H = 40 ft.

Spool No. 4

- No. 1. Valley Oak. h = 65 ft.
 Diam about 1 $\frac{1}{3}$ ft at 1 ft.
 - right hand tree
 No. 2. ditto.

- no 2. Valley Oak, 55 ft h. circ = 4 ft at ground
 11 - $\frac{1}{25}$ Bright sunshine 4-9" at 4 ft
- no 3. Do. 16 - $\frac{1}{25}$ " " " "
- no 4 " 11 - $\frac{1}{25}$ " " " "
- no 5 " 11 - $\frac{1}{25}$ Pole Type.

Spool no 5.

- no 1. Clem Graham, Hawley School
 100 ft h. 4 ft circ at 4 $\frac{1}{2}$ ft. 3 ft h.
 11 - $\frac{1}{5}$ 3 a clock + semi-cloudy
- no 2 ditto 17'-8" at 4 $\frac{1}{2}$ ft +
 75 ft h.
- no 3. Whiah, Valley Oak 46 ft h. max
 11 - $\frac{1}{38}$ - 10, 45 bright sunshine 25
- no 4 ditto.
- no 5 55 ft h. 11 - $\frac{1}{50}$
 4-10 at 3 ft; 6-8 at ground.
- no 6 ditto

- Contention is ever hottest on minor matters - Emerson.

Spool no 6 - Whiah
 no 1. Valley Oak, 55 ft h. same as spool
 5 - no 6.

11 - $\frac{1}{50}$

no 2. Ditto 16 - $\frac{1}{25}$

no 3. " 11 - $\frac{1}{50}$

no 4. 5 ft at 3 ft same as
 spool 5 no 3

11 - $\frac{1}{50}$

no 5. Ditto 11 - $\frac{1}{50}$

no 6 " " "

no 7 " " "

no 8 11 - $\frac{1}{50}$ 65 ft h.

circ = 4 ft at 3 ft.

no 9. Laurel, Olema
 11 - $\frac{1}{38}$ sun. 30 ft
 h + 50 ft. broad.

no 10 ditto 11 - $\frac{1}{25}$

Spool 7
 no 1. Ditto 11 - $\frac{1}{50}$

- 483 - Colonel C. C. Royce, Chico
Rancho Chico
- T. L. Bohlender, Chico, fore-
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- J. W. Olsen, Chester,
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